TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

NATURAL FIBERS A 1

EFFECT OF SULFURIC ACID ON WOOL. PART 1. INFLUENCE OF CONCENTRATION OF ACID ON THE HISTOLOGICAL ATTACK. R. L. Elliott, R. S. Asquith, and D. H. Rawson. J. Soc. Dyers Colourists 74: 173-176 (Mar. 1958). (1537)

The attack of sulfuric acid of various concentrations on wool was examined under different conditions of temperature and time of treatment, the damaged fibers observed microscopically, and results correlated with weight changes and amide-nitrogen analyses. Graphs. Photomicrographs. 16 references.

EFFECT OF SULFURIC ACID ON WOOL. PART 2. CHEMICAL ATTACK OF CONCENTRATED ACID. R. L. Elliott, R. S. Asquith, and D. H. Rawson. J. Soc. Dyers Colourists 74: 176-180 (Mar. 1958). (1538)

Investigation of wool samples after various times of treatment with concentrated sulfuric acid showed that hydrolyzable sulfate increased to a maximum after 1 hr. A fall in sulfate after 1 day to a relatively constant value corresponds to the loss of a scaly membrane. A slow increase in total sulfur is due to removal of the low-cystine-containing fraction of the fiber and to slow benzene-ring sulfonation. 12 references.

EFFECTS OF GAMMA RADIATION ON COTTON. PART 1. SOME OF THE PROPERTIES OF PURIFIED COTTON IRRADIATED IN OXYGEN AND NITROGEN ATMOSPHERES. F. A. Blouin and J. C. Arthur, Jr. (Southern Regional Research Lab.). Textile Research J. 28: 198-204 (Mar. 1958). (1539)

The effects of gamma radiation on some of the physical and chemical properties of purified cotton, irradiated in atmospheres of oxygen and nitrogen, are reported. It was found that high energy gamma irradiation of cotton resulted in carbonyl group formation, carboxyl group formation, and chain cleavage in the approximate ratio of 20:1:1; increased solubility in water and in dilute alkali; decrease in tensile strength of the fibers; small but unusual changes in moisture regain; relatively unchanged infrared absorption spectra; and the same type of degradation in a nitrogen atmosphere as in an oxygen atmosphere, with oxygen producing only slight enhancement of the reaction. Table. Graphs. 43 references.

EFFECTS OF GAMMA RADIATION ON COTTON. PART 2. PROPOSED MECHANISM OF THE EFFECTS OF HIGH ENERGY GAMMA RADIATION ON SOME OF THE MOLECULAR PROPERTIES OF PURIFIED COTTON. J. C. Arthur, Jr. Textile Research J. 28: 204-206 (Mar. 1958). (1540)

MICROSCOPIC STUDIES ON THE STRUCTURE AND COMPOSITION OF KERATIN FIBERS. J. Menkart and A. B. Coe (Textile Research Inst.). Textile Research J. 28: 218-226 (Mar. 1958). (1541)

The distribution of cystine sulfur in the cortex of various wool fibers has been investigated by the staining of cross sections with mercury vapor. The receptivity to dyes of various portions of the cortex has been found to be inversely related to their sulfur content. After oxidation with peracetic acid or bromine, the cystine-rich portion of the cortex in bilateral fibers (the para-cortex) swells more in aqueous solutions than the ortho-cortex. Fibers so oxidized swell greatly in dilute, neutral or alkaline, solutions of strong electrolytes; the swelling is repressed at higher salt concentrations. Photomicrographs. Color plate. 31 references.

SORPTION KINETICS OF WATER VAPOR IN WOOL FIBERS. J. G. Downes and B. H. Mackay (Wool Textile Research Labs., Australia). J. Polymer Sci. 28: 45-67 (Feb. 1958). (1542)

Using a modification of the vibroscope technique, studies have been made of the sorption kinetics of water vapor in single wool fibers. Graphs. Tables. 38 references.

ESTIMATION OF CORTICAL COMPONENTS IN VARIOUS WOOLS. W. J. Thorsen (Western Regional Research Lab.). Textile Research J. 28: 185-197 (Mar. 1958). (1543)

Because lead, nickel, and bromine solutions appear to produce stains of suitable contrast, they were chosen in the present investigation in an attempt to estimate the amounts and distribution of the two cortical components of wools of different character and origin. This paper reports comparison of these staining methods with solubility and mechanical properties and shows that differential staining of wool and mohair varies systematically not only with crimp but also with fiber diameter, maturity of sheep at shearing, breed of sheep, and degree of fiber elongation or supercontraction. Graphs. Photomicrographs. 20 references.

ECLIPSE OF KAPOK. Texture 5: 20-21 (Mar. 1958). (1544)

The properties of kapok as a buoyant material and for upholstery stuffing are examined, and it is noted that it is inferior to many synthetic materials, e.g. foamed rubber and glass fibers.

MANMADE FIBERS A 2

ON THE STRESS RELAXATION OF NYLON 6. T. Yoshitomi, K. Nagamatsu, and K. Kosiyama (Kyushu Univ.). J. Polymer Sci. 27: 335-347 (Jan. 1958). (1545)

PROCESSING ORLON ACRYLIC STAPLE ON THE WOOLEN SYSTEM. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 8 p. Bull. OR-79. Free. (1546)

RESISTANCE OF ORLON TO DEGRADATION BY CAUSTIC SODA. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 5 p. Bull. OR-89. Free. (1547)

REPORTS ON PLASTICS IN THE TROPICS. 5. NYLON MONOFILAMENTS. Gt. Brit. Ministry of Supply. Her Majesty's Stationery Office, London, England. 1957. 28 p. 4s. (1548)

SUNLIGHT STABILIZED REEVON POLYETHYLENE FILAMENTS. Am. Textile Reptr. 72: 61 (Apr. 24, 1958). (1549)

Charts showing results of accelerated weathering tests on Reevon filaments as compared with conventional filaments are given.

YARN PRODUCTION B

SURFACE ACTIVE AGENTS IN SYNTHETIC RUBBER DRAFTING ELEMENTS. M. Balkin (George Angus & Co. Ltd). Textile Weekly 58(1): 951-953 (Apr. 4, 1958). (1550)

It has been found that if surface active agents are added to the synthetic rubber during the compounding stage, drafting elements are obtained with many advantages. Surface active agents can be incorporated with advantage not only in roller coverings but in synthetic rubber draft aprons.

RECOVERING FIBERS FROM WASTE RUBBER. Textiles in Ind. 3: 21-22, 24 (Mar./Apr. 1958). (1551)

In the new technique described, the recovery of the fiber is based on a centrifugal operation for the separation of rubber and fiber. Operation of the central unit of the system, the Sturtevant separator, is covered. Photographs. Diagram.

TOW TO SLIVER CONVERSION. Textile Merc. 138: 505-506 (Mar. 28, 1958). (1552)

The Rieter D6/2 converter is a versatile short processing machine for converting filament tows into staple sliver, and is designed for blending synthetic fibers and wool. Photographs. Diagram.

REPORT OF DISCUSSIONS OF QUESTIONS ON OPENING, PICKING, CARDING, AND SPINNING. Textile Operating Executives of Georgia. Atlanta, Ga., 1958. 10 p. (1553)

Opening, picking, and carding: SRRL openers, relative humidity, beaters for pickers, card screens, large roving cans, lickerin covers, flexible card bends, high speed drawing, flyers, and roving frame stop motions. Spinning, spooling, and warping: nylon spindle tape, roving creeling, spinning rings, warp wind cams, long draft systems, leather vs synthetic aprons, antifriction spindles, spinning frame cleaners, spooling, and warpers.

CAUSES OF EXCESSIVE SIZE VARIATIONS FROM PICKING THROUGH SPINNING. N. L. Enrick. Inst. of Textile Technol., Charlottesville, Va., Jan. 10, 1958. 15 p. ITT report no. 18. (1554)

Causes of excess size variation in a spinning mill are listed for each processing stage, classified by within-machine, between-machine, and room-overall variations. An example illustrates the determination of the actual variation coefficients in a mill, from process-to-process, and shows how a comparison of actual to normally expected variations leads to discovery and correction of off-standard conditions.

OPENING, PICKING, FIBER PREPARATION B 1

SRRL OPENER-CLEANER. R. A. Rusca and E. F. Wallace (Southern Regional Research Lab.). Textile Inds. 122: 145, 147 (Apr. 1958). (1555)

Data on the SRRL opener-cleaner cleaning efficiency and waste fiber length are presented. Tables. 3 references.

CARDING AND COMBING B 2

HOW TO IMPROVE CARD WEBS. K. H. Gramminger. Textil-Praxis (English ed.) No. 1: 1-4 (Mar. 1958). (1556)

The importance of careful setting of the card depending on fiber quality is pointed out, and the use of a test cord for determining the optimum setting is described. Table. Diagrams.

REMOVING DUST IN COTTON CARDROOMS. F. Brownsett. Textile Mfr. 84: 124-127 (Mar. 1958). (1557)

This paper discusses the work carried on at Shirley Inst. during the past few years on developing and testing different methods of reducing cardroom dust. Diagrams. Graph. Photographs.

TAPE CONDENSER. PART 2. W. J. Crofts. Textile Inds. 122: 105-107 (Apr. 1958). (1558)

Some of the causes of uneven condensing are waves in one or more of the four aprons on any deck, and this waviness is usually due to too much tension at one end of the apron. The author discusses leather vs rubber aprons, setting the aprons, changing the amount of condensing, and the installation of new aprons.

TROUBLE-SHOOTING ON COTTON COMBERS. PART 2. M. Gross. Textile Inds. 122: 141-142 (Apr. 1958). (1559)

The importance of correct settings, fixer training, and periodic inspections of combed webs for abnormal fiber arrangement is stressed.

CHECKLIST FOR THE COMBER. Rhyne-Houser Mfg. Co. Textile World 108: 80 (Apr. 1958). (1560)

Maintenance and cleaning schedule for reducing variation and increasing efficiency at the comber.

DRAWING AND ROVING B 3

NEW METHOD FOR WINDING ROVING ON THE WEB DIVIDER. W. Petersen. Textil-Praxis (English ed.) No. 1: 5-8 (Mar. 1958). (1561)

Instead of traversing thread guide and fixed condenser drums, the Spinnbau web divider uses a fixed thread guide and traversing condenser drums. This results in longer roving bobbins. Features and operation of the new machine are described in detail. Diagrams. Photographs.

HIGH SPEED GILLING SYSTEM. Prince-Smith & Stells Ltd. Man-Made Textiles 34: 74-75 (Apr. 1958). (1562)

Features, operation, and application of the Speed-o-Gill are covered. Photograph.

SPINNING, WINDING, TWISTING B 4

JAPANESE RING FRAMES: A FEW FEATURES. A. K. Chakrabarty. Textile Dig. 17: 215-219 (Oct.-Dec. 1956). (1563)

Variable speed spindle drive, lighter spindles, retarding motion, and reduction gear crown wheel are discussed. Diagrams.

SPINNING RINGS AND BLACK MAGIC. J. Foard (Kluttz Mach. & Foundry Co.). Textile Bull. 84: 59-62 (Apr. 1958). (1564)

A method of treating rings with a sulfurizing bath and giving them a hardness in excess of 60 Rockwell C scale produces a dry lubricity on the running surface of the ring which prevents galling from overheated travelers. The rings can be started up at top spindle speeds and will break in almost immediately. Traveler life is claimed to be more than doubled. Photographs.

A LOOK AHEAD IN SPINNING. R. E. Pomeranz. Textile Bull. 84: 63-64 (Apr. 1958). (1565)

Probable developments in spinning machinery in the next 10 years are outlined.

SOME FACTORS AFFECTING YARN FORMATION IN WOOLEN MULE SPINNING. PART 2. DISTRIBUTION OF TWIST IN IRREGULAR SLIVERS. W. D. McNair and N. H. Chamberlain (Leeds Univ.). J. Textile Inst. 49: T105-T118 (Mar. 1958). (1566)

SOME FACTORS AFFECTING YARN FORMATION IN WOOLEN MULE SPINNING. PART 3. IRREGULARITY CHANGES DURING DRAFTING. W. D. McNair and N. H. Chamberlain (Leeds Univ.). J. Textile Inst. 49: T119-T130 (Mar. 1958). (1567)

DAVIS AND FURBER RING SPINNING FRAME FEATURES. Davis & Furber Mach. Co. Am. Textile Reptr. 72: 63-70 (Apr. 24, 1958). (1568)

The benefits resulting from such design features as variable speed drive, ballooning rings, quick threading delivery top roll, automatic gear motor rail rewind, etc., are discussed. Photographs.

MODERN WORSTED SPINNING PRACTICE: RECENT SPINNING DEVELOPMENTS. N. Roper. Textile Mfr. 84: 129-133 (Mar. 1958). (1569)

Detailed discussion of some of the newer spinning machines, together with an estimation of their performance from the points of view of yarn quality, higher drafts, larger packages, versatility, and efficiency. Diagrams. Photographs. 6 references.

EFFECT OF TRAVELER SPEED ON TWIST LOSS. M. Chagro. Textile Inds. 122: 135-136, 147 (Apr. 1958). (1570)

Tests were made on six yarns to determine the mechanical loss or turns per in. due to traveler loss in revolutions per in. The consistency of the low loss of twist attributable to the traveler indicates that any loss of twist in excess of 0.5 tpi would suggest causes other than the traveler. Spindles and tapes should be checked immediately. Tables.

YARNS B 5

SOME FACTORS AFFECTING THE HAIRINESS OF WORSTED YARNS. A. Barella and M. Ruiz-Cuevas. (Letter to the editor). J. Textile Inst. 49: T170-T171 (Mar. 1958). (1571)

POLYTHENE IN TEXTILES: PRODUCTION, PROPERTIES, PROCESSING, AND USES. PART 2. W. Henstead. Man-Made Textiles 34: 46-47 (Apr. 1958). (1572)

Properties of Courlene yarns, and precautions for winding, warping, and weaving are covered.

IDENTIFICATION AND PROPERTIES OF THE NEWER SYNTHETIC YARNS. G. Smith. Hosiery Trade J. 65: 96-97 (Apr. 1958). (1573)

The relationship of thermoplasticity to the manufacture of stretch and bulk yarns, the methods used for producing the yarns, and the resultant properties of the modified yarns are discussed. Photomicrographs.

PRELIMINARY STUDY OF THE RELATION BETWEEN TWIST AND STRENGTH IN FILAMENT RAYONS. Srinagabushana and S. Srikantiah. Textile Dig. 17: 199-208 (Oct.-Dec. 1956). (1574)

Twist-strength curves for yarns of various denier and structure, including maximum turns to rupture. Graphs. Photographs. Tables.

TWISTED NOVELTY YARN ON SURPLUS SPINNING FRAMES. G. B. Peeler (Gold-Tex Fabric Corp.). Textile World 108: 76-78, 167-168 (Apr. 1958). (1575)

Many different kinds of twisted novelty yarns can be made by modifying a surplus spinning frame for twisting. The basic parts needed and methods for making spiral twist, gimp, twisted slub, spot, and cover yarns are described. Diagrams.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

INTERFERENCE IN PROCESS OF WINDING. D. N. Rai. Textile Dig. 18: 127-137 (July/Sept. 1957). (1576)

Analysis of winding operation from a viewpoint of optimum frame assignments per operator, taking into consideration random and cycle winding. Tables.

SELECTING A SLASHER DRIVE. G. Manning. Textile World 108: 79, 174-176 (Apr. 1958). (1577)

The selection of the proper drive depends on a clear understanding of the requirements of the yarns to be processed on the particular slasher. Points to be considered are outlined.

YARN PREPARATION: WARPING, CONING, AND PIRN WINDING. R. Muschamp. Textile Weekly 58(1): 954, 956, 986 (Apr. 4, 1958). (1578)

In this lecture on high speed yarn processing, the outstanding features of the Foster 202 cone winder, Reiner heavy duty warper, and Britoba 4-spindle and Muschamp SS100 and SS166 single spindle pirn winders are briefly discussed. Photographs.

DEVELOPMENTS IN YARN PREPARATION. F. Southworth (Thomas Holt Ltd). Textile Weekly 58(1): 903-906, 919 (Mar. 28, 1958). (1579)

Design and operation of the Holt model U automatic coner, the Minifast knotter developed in connection with the coner, and beamer models 7, 8, and 10 are described.

DEVELOPMENT OF THE PIRN WINDING MECHANISM. D. Brunnschweiler. Textile Mfr. 84: 120-123 (Mar. 1958). (1580)

A review of developments such as automatic doffing, traverse mechanism, and pirn diameter control. Tables. Photographs. Diagram.

HOW DRY IS THIS WARP? Textile Inds. 122: 117-119 (Apr. 1958). (1581)

The Moisture Monitor indicates if the yarn is coming from the slasher with a moisture content that is normal, too wet, or too dry. Its operation and advantages are discussed. Photographs.

WARP SIZING OF SYNTHETIC YARNS. L. Meier. Textil-Praxis (English ed.) No. 1: 9-12 (Mar. 1958). (1582)

See abstr. 2468/57.

WEAVING C 2

WEFT SUPPLY FOR AUTOMATIC LOOMS. V. Luzet. Rayonne et Fibres Synthet. 13, No. 6: 741-746 (1957). In French. Through BCIRA 37: 615 (1957). (1583)

Calculations are given for determining the number of automatic looms which one assistant weaver is able to supply with weft pirns so that no interruption in work takes place.

FORMULA FOR MAKING EFFECTIVE LOOM-STOP CHECKS. E. R. Beckner. Textile World 108: 69, 174 (Apr. 1958). (1584)

The ratio-delay method gives accurate data at less cost than the usual frequency checks. It also checks the accuracy of timestudies and workloads. The system gives accurate data on loom hours lost from warp, filling, and mechanical stops; smashes; warpouts; and waiting for warps, cleaning, and loomfixers. From this data, the dollar cost can be computed and compared with mill standards.

KEEPING WEAVE ROOMS CLEAN. Textile World 108: 52-53, 172 (Apr. 1958). (1585)

Results of a survey made to see how cotton weaving mills are cleaning their looms and buildings. ,Photographs.

WEAVING ZIPPER TAPES. A. Thompson. Textile Weekly 58(1): 908, 910 (Mar. 28, 1958). (1586)

Weaves for tubular round bead, tubular square bead, reinforced edge tape, tape with bead formed by two cords, and tape with Y section are described and illustrated.

SAURER AUTOMATIC LOOMS. J. Crowther. Textile Weekly 58(1): 1041-1046 (Apr. 11, 1958). (1587)

Among the features discussed are: lay sword movement, shedding mechanism, drop box motion, picking motion, letoff, takeup, stop motion, bobbin changing motion.

SETTING OF A LOOM WITH THE AID OF GAUGES. F. Walz and W. Schick. Textil-Praxis (English ed.) No. 1: 13-18 (Mar. 1958). (1588)

See abstr. 1221/58.

LOOMS OF THE FUTURE. J. B. Winder. Textile Weekly 58(1): 831-832 (Mar. 21, 1958). (1589)

The practical limitations of some unusual loom developments of theoretical interest are briefly reviewed, and the features of the Brit. Northrop high-speed topless loom, which the author cites as "the loom of the future," are described.

WEAVING OF TERRY TOWEL FABRICS. H. Barlow. Textile Recorder 75: 67-69 (Apr. 1958). (1590)

The operation of semi-automatic and fully automatic looms is described. Diagram.

MAXBO SHUTTLELESS LOOM. P. Abbenheim. Textile Inds. 122: 114-116 (Apr. 1958). (1591)

This report of an installation of 40 Maxbo air jet looms in a Swedish mill includes information on picking, efficiency, and types of cloth being woven. Photographs. Diagrams.

SCIENTIFIC TACKLING: LOOM SETTINGS. I. H. Thomas. Textile Weekly 58(1): 807-810 (Mar. 21, 1958). (1592)

The importance of providing standard settings for all looms weaving the same type of fabrics in order to simplify finding the sources of defects is stressed. Examples of settings for shed timing, shed size, pick timing, and shuttle speed are given. Diagram. Graphs.

DEVELOPMENTS IN LOOMS FOR WEAVING FANCY WOOLENS AND WORSTEDS. D. C. Snowden. Textile Recorder 75: 61-62 (Apr. 1958). (1593)

Three postwar developments in pick-and-pick automatic looms are described: an improved version of the Schwabe 5-and-5 box loom, the Sulzer weaving machine, and the Crompton & Knowles PAPA loom. Some of their advantages and limitations are pointed out. Photographs.

ARE WE USING THE WRONG KNOT? W. Wegener and J. Schneider. Textile Inds. 122: 127-128 (Apr. 1958). (1594)

In this brief account of a research report on the relative efficiency of various knots, the following were compared: the traditional weaver's knot, reef knot, tension knot, double weaver's knot, dog knot, and fisherman's knot. It was found that the weaver's knot was by far the most inferior, although the reef knot ran a close second.

KNITTING C 3

KNITTING TECHNIQUES FOR HOSE OF SYNTHETIC AND MODIFIED FILAMENT YARNS. J. Rest. Hosiery Trade J. 65: 90-93 (Apr. 1958). (1595)

The problems associated with knitting nylon yarn into hosiery include: storage conditions, yarn defects, extensibility of seamless welts, yarn tension, snagging, leg-length variations, wearability. Techniques for dealing with these problems are discussed.

TIPS FOR KNITTING MULTIPLE-THREAD FF HOSE. Textile Inds. 122: 166-167 (Apr. 1958). (1596)

AGILON STRETCH YARN FOR KNITWEAR. Brit. Nylon Spinners Ltd. Man-Made Textiles 34: 54 (Apr. 1958). (1597)

Results of experiments with Agilon on circular and warp knitting machines are briefly reported.

FIGURE DESIGNING WITH PATTERN WHEELS. J. B. Lancashire. Hosiery Trade J. 65: 68-70 (Apr. 1958). (1598)

This article is concerned with application to circular machines.

RECENT ADVANCES IN CIRCULAR KNIT HOSE MACHINERY. I. R. Thornton. Can. Textile J. 75: 42-47 (Mar. 21, 1958). (1599)

Among the recent developments discussed are: H. Chell & Co. Ltd device for demi-toe construction; Bernard Reymes Cole Ltd attachment for fashion-shaped heel; Scott & Williams grab takeup and constant tension device and integrating stitch differential length control attachment; Fidelity yarn tensioner and compensator; and electronic variable speed drives. Photographs. Diagram.

GERMAN KNITTING MACHINERY DEVELOPMENTS. R. Innes. Hosiery Trade J. 65: 82-83 (Apr. 1958). (1600)

OVERNIT CIRCULAR JACQUARD MACHINE. Mayer & Cie. Hosiery Trade J. 65: 78-79 (Apr. 1958). (1601)

The Overnit machine is designed for the production of plain and fancy double-knit piece-goods for outerwear. It is a cylinder and dial model which is built chiefly in 30-in. diameter with 18 and 24 feeders. Features and operation of the machine are described. Photographs. Diagram.

CARE OF LATCH NEEDLES. W. Shewmake. Textile Inds. 122: 169-170 (Apr. 1958). (1602)

The proper handling of latch needles and sources of hidden damage are discussed. Photographs.

FF KNITTERS: MULTIPLE ASSIGNMENTS. W. B. Snow. Textile Inds. 122: 175-178 (Apr. 1958). (1603)

The mechanics, advantages, and disadvantages of multiple assignments are discussed.

WARP KNITTING CALCULATION MADE EASY. G. L. Allison. Skinner's Silk & Rayon Record 32: 281-286 (Mar. 1958). (1604)

A method of predicting run-in per rack which gives good results in practice is explained and illustrated. General rules and definitions, as well as tables used in calculations for nylon, acetate, and viscose, are included.

STATISTICAL METHODS IN FABRIC DEVELOPMENT. F. J. Evans, W. T. Holfeld, and H. J. Kolb (E. I. du Pont de Nemours & Co.). Modern Textiles Mag. 39: 67-75 (Apr. 1958). (1605)

The use of the Univac computer for determining the Orlon sweater construction factors which would give the best combination of good aesthetics and performance. Tables. Graph.

FABRICS C 4

HIGH LOFT, SPRAY BONDED NONWOVEN FABRICS. F. M. Buresh. Textile Bull. 84: 48-51 (Apr. 1958). (1606)

Details of machine layout and production are covered, and the wide range of products which can be produced on the line illustrated are listed. Photographs. Diagram.

NONWOVEN APPLICATIONS. S. I. Rudo. Modern Textiles Mag. 39: 35, 77 (Apr. 1958). (1607)

The present and potential end uses of nonwoven fabrics are briefly reviewed.

CLOTH TERMS AND PARTICULARS: SILK: MEDIUM AND HEAVY PLAIN WEAVE. W. Middlebrook. Textile Mfr. 84: 137-139 (Mar. 1958). (1608)

Brief descriptions, including ends, picks, and direction of yarn twist in poplins, taffetas, crepes, grandrelle stripes, grosgrains, dupions, moires, crepe-de-chines, and other silk and rayon specialties.

AERODYNAMIC HEATING OF PARACHUTES. A. L. Ruoff, S. W. Liu, and F. Frank (Cornell Univ.). Wright Air Development Center, Wright-Patterson Air Force Base, Ohio, 1957. 53 p. WADC tech. report 57-157. (1609)

Heating rates for a parachute employed at varying Mach numbers (2-5) and altitudes (sea level to 100,000 ft) are obtained. Various methods of protecting the nylon parachute are discussed. Tables. Graphs.

COVERING FABRICS FOR COMFORTERS CONTAINING DACRON POLYESTER FIBERFILL. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 2 p. Bull. D-94. Free. (1610)

Calendered fabrics, of the proper construction, reduce fiberfill leakage through the covering fabric to a minimum.

MADRAS AND BAGDAD CURTAIN FABRICS. W. Kuhn. Textil-Praxis (English ed.) No. 1: 22-27 (Mar. 1958). (1611)

Madras and Bagdad weaves are curtain fabrics which consist of a ground texture into which colored figuring picks are inserted for the formation of the special pattern. The difference between the two fabrics is in the weave of the ground texture. Madras is produced by half cross gauze, Bagdad by plain weave. Both are ornamented fabrics with extra weft. Weaving details for both fabrics are given. Diagrams.

FABRIC DESIGN IN THE WOOL INDUSTRY. C. Kisby. Texture 5: 30-32 (Mar. 1958). (1612)

Factors influencing changes in design of wool fabrics for men's wear, women's wear, and furnishing are discussed.

WOVEN FABRIC STRUCTURE: FANCY DIAGONAL PATTERNS. PART 3. LARGE-REPEAT WEAVES WITH ECONOMIC DRAFTING ARRANGEMENTS. D C. Snowden. Man-Made Textiles 34: 57 (Apr. 1958). (1613)

WARP STREAKS AND OTHER DEFECTS IN CORDUROY AND IN VELVETON FABRICS. H. Rödlich. Rayonne et Fibres Synthet. 13, No. 5: 597-602 (1957). In French. Through BCIRA 37: 608 (1957). (1614)

Tension differences during winding, twisting, rewinding, and warping, to which the defects are attributable, are discussed and directions are given for their elimination.

TUFTED CARPETS: WAVELINE PATTERNING WITH MULTICOLOR EFFECTS. Seamless Axminster Co. Ltd. Man-Made Textiles 34: 60-61 (Apr. 1958). (1615)

A new conception of design is incorporated by utilizing a full-width waveline motion together with the permutation of two 2-color spun-dyed viscose yarn selections providing a finished 4-color zig-zag effect in the carpet construction. The novel color effects are capable of wide adaptation in terms of style and texture. Photographs.

ORNAMENTATION OF APPAREL FABRICS: EXTRA YARN DESIGNING. V. Lobl. Modern Textiles Mag. 39: 38-52 (Apr. 1958). (1616)

In the extra yarn design method, the yarns do not contribute to forming the fabric itself. As the term "extra" implies, these yarns are introduced into the cloth in addition to the ground construction for the sole purpose of ornamenting the fabric. The extra yarn may be introduced into the cloth to form detached spots or stripes in either warp or filling direction or both simultaneously. In this first article of a series on extra yarn designing, spots formed by an extra system of warp yarn, known as warp clips, are discussed. Diagrams. Photographs.

CAUSES OF SHINY WEFT THREADS IN VISCOSE RAYON FABRICS. E. Lindner. Deut. Textiltech. 7, No. 5: 300-303 (1957). In German. Through BCIRA 37: 609 (1957). (1617)

The causes of shiny weft streaks are investigated and directions given for their elimination. The investigation is not limited to weaving; results of experiments are reported, which include winding (cheeses and pirns), weaving, and finishing.

CAUSES OF WAVY POLYAMIDE FABRICS AND SHINY PLACES IN VISCOSE RAYON FABRICS. J. Hajek. Deut. Textiltech. 7, No. 5: 296-299 (1957). In German. Through BCIRA 37: 609 (1957). (1618)

The behavior of polyamide and viscose rayon fibers during processing and the stresses causing the occurrence of shiny places and waves in the fabrics are discussed, with reference to two important factors: the elongation and elasticity moduli. Directions are given for the processing of viscose/rayon and polyamide filaments.

EXAMINATION OF MOTTLED AND STREAKY SHOT AND GRISETTE FABRICS. N. Bigler. SVF Fachorgan Textilveredlung 12, No. 7: 475-479 (1957). In German. Through BCIRA 37: 608 (1957). (1619)

Various methods for determining the causes of faulty grisette and shot articles are described (surface impression, photogram or silhouette method, mechanical removal of the weft or warp thread, examination of the unwoven yarn), and examples are shown.

YARN AND FABRIC FAULTS IN FF AND CIRCULAR-KNIT HOSE. G. Smith. Hosiery Trade J. 65: 94-95 (Apr. 1958). (1620)

The faults discussed include twist faults, twist setting faults, yarn crimp faults, bands in Agilon hosiery, wale widening, and interferences in loop rotation. Photographs.

SYNTHETIC FIBERS IN THE AMERICAN FISHING INDUSTRY. E. I. du Pont de Nemours & Co. Textiles in Ind. 3: 23-24 (Mar./Apr. 1958). (1621)

CAR UPHOLSTERY IN THE MODERN IDIOM. PART 1. FABRIC REQUIREMENTS. Man-Made Textiles 34: 43-45 (Apr. 1958). (1622)

The reasons for the growing popularity of rayon fabrics for car upholstery, types of fabrics used, and the test criteria which they must meet are discussed. Photographs. Swatches.

NYLON AND TERYLENE INDUSTRIAL APPLICATIONS. Man-Made Textiles 34: 48-51 (Apr. 1958). (1623)

In this survey of the industrial and commercial applications of nylon and Terylene, the following are briefly discussed: polyurethane-proofed nylon; nylon conveyor belting, tire cord, lightweight netting and deep sea fishing trawls; Terylene netting, sails, ropes, coated protective fabrics, and conveyor belts. Photographs.

TRICEL FOR BLOUSE AND DRESS FABRICS. Man-Made Textiles 34: 52-53 (Apr. 1958). (1624)

Recommended fabric constructions and finishing procedures for optimum appearance and performance are outlined. Swatches.

DEVELOPMENT OF HYPALON-COATED DACRON AND ITS USE IN LIGHTWEIGHT AIR-SUPPORTED RADOMES. D. E. Setter. U.S. Air Force. Air Research & Development Command. Rome Air Development Center. Gen. Eng. Lab., Griffiss Air Force Base, N.Y. Nov. 1956. 36 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $3.00, photostat $6.30. PB 126 445. (1625)

This report covers the historical background, developmental efforts, and testing that brought Hypalon-coated Dacron into existence. The fabrication of a prototype radome 35 ft in diameter is also discussed, and further recommendations are included. Tables.

HEAT-SHAPED DYNEL FABRICS. A. L. Snyder (Union Carbide Chem. Co.). Am. Textile Reptr. 72: 31, 33 (Apr. 24, 1958). (1626)

New design and engineering innovations in the production of clothing, radios, furniture, and many industrial parts are possible through the use of special heat-shaped fabrics of Dynel. The shaping process is done by forcing a cold mold into a piece of 100% Dynel that is clamped on the outer periphery and heated at 320° F. The fabric is held in shape while being permitted to cool. The clamped area can then be trimmed to size. The shaped fabric will retain its form until reheated to nearly the temperature of shaping. Photographs.

FINISHING AND CHEMICAL PROCESSING D

BLEACHING, DYEING, AND FINISHING: REVIEW OF RECENT DEVELOPMENTS. A. J. Hall. Textile Merc. 138: 55-63 (suppl., Mar. 1958). (1627)

FINISHING OF CORD VELVET. R. Günther. Textil-Praxis 12, No. 6: 573-581 (1957). In German. Through BCIRA 37: 597 (1957). (1628)

A finishing plan covering 34 treatment stages is described, with reference to the machinery required for the individual processes.

RESULTS IN FINISHING. K. Schicktanz. Textil-Praxis (English ed.) No. 1: 28-33 (Mar. 1958). (1629)

Causes and cures of cloudy fabrics, bad smelling fabrics, stains, milling streaks, holes, moiré-effect, uneven raising and shearing, stiffness, and uneven selvages are briefly reviewed.

HEAT SETTING AND FINISHING OF HEAVY DUTY YARNS T. W. Riley (Rochdale) Ltd. Man-Made Textiles 34: 77 (Apr. 1958). (1630)

Features of a heat setting and dipping machine for stretching and heat stabilization of thermoplastic yarns and cords are described. Photographs.

HEAT SETTING AND DIPPING MACHINES. T. W. Riley (John Bright & Bros. Ltd). Textile Weekly 58(1): 884, 886 (Mar. 28, 1958). (1631)

The new heat setting machine described has been designed for the stretching and heat-stabilizing of thermoplastic yarns, either in continuous form or as a spun yarn. The dipping machine is for impregnating cords and yarns with various types of dip solutions, usually of aqueous media, and for the production of low stretch cords. Features are briefly described. Photographs.

HEAT SETTING WOVEN AND KNITTED MANMADE FABRICS. H.-G. Jakob. Reyon, Zellwolle u. Chemiefasern No. 5: 355-357; No. 7: 501-504 (1957). In German. Through BCIRA 37: 597 (1957). (1632)

In continuation of the previous article (see abstr. 99/58), the author describes wet fixing methods (with boiling water and in aqueous medium by the high-temperature method); fixation in aqueous medium in the presence of suitable swelling agents; and fixing with saturated steam.

CHEMICAL PROCESSES D 1

TEFLON-BACKED PRESSURE TAPE IN FINISHING. Harodite Finishing Co. Am. Textile Reptr. 72: 41, 43, 95 (Apr. 24, 1958). (1633)

In every stage of wet goods processing, there has always been the problem of the buildup of sizing agents and lint on pot-eyes, carrying rolls, and drying cans. The use of Teflon-backed pressure sensitive tape with a "mirror milled" finish provides a surface to which few materials can adhere. Other applications in finishing are also discussed. Photographs.

CELLULOSE COTTON FIBERS: GLUCOSE CHARACTER. Texture 5: 18-20 (Mar. 1958). (1634)

The significance of the anhydro-glucose units in cotton for the production of chemically modified cottons is examined briefly.

HOW TO METALIZE FABRICS. S. Plum. Skinner's Silk & Rayon Record 32: 378-383 (Apr. 1958). (1635)

This survey includes information on metalizing techniques, equipment, and cost. The potential outlets for metalized fabrics are also discussed. Photographs. Diagrams. Swatches.

METALIZATION OF TEXTILES, PLASTIC FOILS, AND PAPER. H. Jörder. Textil-Praxis (English ed.) No. 1: 35-38 (Mar. 1958). (1636)

The features and operation of the VBS2 (Vacuumtechnik AG) high vacuum vaporization installation for the metalization of textiles, etc., and the properties of the materials so metalized are described. Photographs. Diagrams.

COMPARATIVE MERCERIZATION OF YARNS MADE FROM PIMA S-1, PERUVIAN PIMA B-B, AND EGYPTIAN KARNAK COTTONS. A. L. Murphy and C. F. Goldthwait (Southern Regional Research Lab.). Textile Research J. 28: 267-269 (Mar. 1958). (1637)

The yarns were mercerized in several different ways to compare them under different conditions; very little difference was found among the cottons. These tests were part of an extensive study of methods for evaluating the mercerizing characteristics of cottons of different varieties or growths, which is of interest to both breeder and user of cottons. The comparisons made here are reported because of particular immediate interest by users of these cottons. Tables. 5 references.

SYNTHETIC RESINS IN TEXTILE MANUFACTURE. A. J. Hall. Fibres 19: 52-54, 56 (Feb. 1958); 85-86, 96 (Mar. 1958). (1638)

Review of progress during the past 25 years in applying resin treatments to improve crease resistance, dimensional stability, and durability of special finishes. Part 2 discusses permanent flameproofing, protection against microbiological attack, special printing techniques, and improvements in abrasion resistance.

OIL AND WATER REPELLENT TREATMENTS FOR COTTON WITH FLUOROCHEMICALS. L. Segal, F. J. Philips, L. Loeb, and R. L. Clayton, Jr. (Southern Regional Research Lab.). Textile Research J. 28: 233-241 (Mar. 1958). (1639)

The application of some fluorochemicals to cotton textiles to impart oleophobic and hydrophobic surface characteristics to the materials is reported. The chromium complexes of perfluoromonocarboxylic acids were used in conjunction with acrylic emulsions. These were employed in separate operations as well as combined with the complexes into one emulsion. Perfluoromonocarboxylic acids were applied to fabrics after impregnation with a mordant to bond the acid to the fiber. Data are presented to show the relative effectiveness of the repellency treatments as governed by the fabric construction. Tables. Graph. Photomicrographs. 5 references.

OPTICAL BRIGHTENING AGENTS. D. A. W. Adams. Textile Weekly 58(1): 957-958 (Apr. 4, 1958). (1640)

The requirements of fluorescent agents, their mechanism of action, their effect on colored fabrics, and their possible toxicity are briefly discussed.

NEW RESINS FOR TREATING WHITE COTTON GOODS. H. C. Borghetty (Rohm & Haas Co.). Textile World 108: 89-107 (Apr. 1958). (1641)

New resins such as nitrogenous resins containing tertiary nitrogen (e.g. cyclic urea resins) and non-nitrogenous resins (e.g. epoxy and polyglycol acetal resins) will withstand the severe chlorination of commercial laundering. The chemical constitution of these resins is described, and methods of overcoming their drawbacks by combination with other resins are discussed. Tables. Graphs. 4 references.

RECENT DEVELOPMENTS IN TEXTILE FINISHING. B. C. M. Dorset. Textile Mfr. 84: 146-150 (Mar. 1958). (1642)

Recent finishing developments reviewed include: treating synthetic fibers to make them resistant to pilling by brushing the surface, followed by shrinking the surface area (BP 786 868); nonyl esters of titanic and zirconic acid as waterproofing compositions (BP 786 444); permanent stiffened resin finishes for synthetic fibers (BP 787 674); increased water absorption capacity of nylon (BP 757 274 and 788 688); and polymeric quaternary ammonium compounds as antistatic agents (BP 788 079).

VERSATILE COTTON IN HIGH STYLE FINISHING. G. Heberlein and E. Weiss (Heberlein & Co. AG). Textile Research J. 28: 227-233 (Mar. 1958). (1643)

Methods used in actual plant operations for finishing of cotton goods for special fashion effects are surveyed. It is pointed out that by combining two or more treatments an unlimited number of fashion effects can be obtained. Many concrete examples of fabrics produced in such a manner are discussed and illustrated. Cotton lends itself to a greater number of finishing methods than any other fiber. This point is emphasized, and the versatility of cotton is demonstrated by a diversity of high grade finishes on fabrics. Color plate. 28 references.

EFFECT OF WATER ABSORPTION OF TEXTILE FIBERS ON DRYCLEANING. R. Hess. SVF Fachorgan Textilveredlung 12, No. 6: 410-421 (1957). In French. Through BCIRA 37: 610 (1957) (1644)

It was found that better drycleaning results are obtained when water is added simultaneously with the solvent (alone or in conjunction with a surface active agent). The optimum addition of water depends upon several factors, of which the main ones are discussed (water fixing power and water content of the garment itself, quantity of surface active agent used and its ability to bind water, and control of the surface active agent and of the water in the solvent bath). Reference is also made to automatic control devices.

NITROGEN FINISH FOR WASH-AND-WEAR COTTONS. Warwick Chem. Co. Am. Textile Reptr. 72: 29, 33 (Apr. 24, 1958). (1645)

Permafresh LCR is a bifunctional, cyclic, reactive compound containing nitrogen in such form that there are no objectionable effects of chlorine retention. Its main characteristics, from the standpoint of wash-and-wear, are maximum shrinkage control and crease resistance, ability to withstand repeated alkaline launderings, and an increase in the hydrophobic properties of cellulose fibers.

CHLORINATION OF WOOL. K. Heidler (Výzkumný Ustav). Veda a Výzkum v Prumyslu Textil. 2: 65-81 (1956). In Czech (English summary). Summary in Chem. Abstr. 52: 4992 (1958). (1646)

FURTHER TESTS ON WASH-AND-WEAR. Consumer Repts. 23: 244-246 (May 1958). (1647)

Three brands of men's wash and wear shirts and 9 brands of women's garments were tested for launderability under commercial and home (ordinary and automatic washing machines) conditions.

DURABLE CREASING OF WRINKLE RESISTANT COTTON. J. D. Reid, R. M. Reinhardt, and R. M. H. Kullman (Southern Regional Research Lab.). Textile Research J. 28: 242-251 (Mar. 1958). (1648)

Both fundamental and practical studies were conducted on a "recuring" process in which cotton goods, already treated with resin and cured (for wash and wear characteristics), are made into garments and aftercured by careful introduction of catalyst. The creases, pleats, cuffs, etc., are then set by heat curing. Creases so introduced are not as durable to laundering as those which can be set in the fabric on an initial cure, but they compare favorably with those found in worsted wool garments. Two possible mechanisms for the recuring process are suggested and evidence in favor of each hypothesis is given. Results on the recuring of both laboratory and commercially resin-treated cotton fabrics are reported. Graphs. Tables. 14 references.

APPLICATION OF RESIN FINISHES TO COTTON GARMENTS USING DRYCLEANING PLANT EQUIPMENT. R. T. Graham, F. Loibl, and J. R. Wiebush (Nat. Inst. Drycleaning). Textile Research J. 28: 252-256 (Mar. 1958). (1649)

Preliminary results are given from a study of the application of a resin finish to cotton garments using drycleaning plant equipment. Cotton fabric swatches of various constructions, including print cloth, denim, sateen, cord, broadcloth, gingham, corduroy, and suiting materials were used. The objective of the work is to impart wrinkle resistance and desirable permanent creases to cotton garments. A tentative procedure for the resin treatment was devised which proved effective on various weaves and weights of cotton fabrics. The cost of application of the resin finish to cotton cord suits in a drycleaning plant is estimated. Tables. Graph. 5 references.

EASE-OF-CARE DEPENDS ON WET CREASE-SHEDDING. Q. Sorel. Skinner's Silk & Rayon Record 32: 389 (Apr. 1958). (1650)

Steaming under pressure or the use of swelling agents make the rayon fabric crease-shedding, a term intended to cover a tendency of the fabric to shed, during wetting, residual crease marks from use in the dry state. Resin treatment to confer shrink and crease resistance following this pretreatment must be held at a minimum so as not to reduce the crease shedding properties. Details of a practical procedure are given. 2 references.

BLEACHING FLAX WITH CHLORITE. F. Dokládal (Výzkumný Ustav). Veda a Výzkum v Prumyslu Textil. 2: 37-51 (1956). In Czech (English summary). Summary in Chem. Abstr. 52: 4991 (1958). (1651)

DIALDEHYDES AS COTTON CELLULOSE CROSS-LINKERS. M. D. Hurwitz and L. E. Conlon (Rohm & Haas Co.). Textile Research J. 28: 257-262 (Mar. 1958). (1652)

It has been postulated that the unfavorable crease-recovery/strength relationship with formaldehyde is a function of the shortness of the acetal cross-link. It has also been postulated that longer cross-links could be derived from long chain dialdehydes, the crease-recovery/strength relationship improving with increasing chain length. Work with the dialdehydes glyoxal (C_2), glutaraldehyde (C_5), and α-hydroxyadipaldehyde (C_6) yielded crease-recovery/strength relationships similar, if not identical, to formaldehyde. This finding is consistent with the known chemistry of the formaldehyde-cellulose reaction in that the acetal linkage controls the length of the cross-link. Graphs. 6 references.

IMPROVED CREASE-RESIST PROCESS FOR COTTON AND LINEN. Textile Merc. 138: 499-504, 509 (Mar. 28, 1958). (1653)

After a discussion of crease-resist finishing with resins formed from mono- and dimethylol ureas and the complex changes in other fabric properties, a new process (BP 790 838) is described which gives a minimum of adverse effects on other properties.

WASH AND WEAR. Am. Fabrics No. 42, Spring 1958, special section, 20 p. (1654)

Wash and wear glossary, facts about structural content, questions and answers, consumer attitudes, etc., are presented in this special section. Fabric swatches.

EFFECT OF LAUNDERING ON CHLORINE RETENTION AND CREASE RESISTANCE OF COTTON FINISHED WITH DIMETHYLOL ETHYLENE UREA. O. C. Bacon, J. E. Smith, and L. E. Hughes (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 47: P259-P262, P272 (Apr. 21, 1958). (1655)

A general discussion of the problem of damage from chlorine retention from crease-resistant finishes on cotton fabrics is presented. Data on crease resistance, tensile strength, fabric discoloration, and chlorine retention obtained with dimethylol ethylene urea finishes on cotton under different conditions of application are given. The results include data on chlorine retention damage before and after 10 launderings in soap and soda ash at 140° F. Graphs. 3 references.

BLEACHING KNIT FABRIC OF ORLON BLENDED WITH COTTON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 2 p. Bull. OR-88. Free. (1656)

Blends of Orlon with cotton can be bleached by either of two methods: formic acid or sodium chlorite.

DYEING AND PRINTING D 2

STRUCTURE AND APPLICATION OF NAPHTOL AS. M. Hückel (Farbwerke Hoechst AG). Can. Textile J. 75: 57-65 (Apr. 18, 1958). (1657)

Theoretical and practical aspects of azoic dyeing are presented. Tables. 9 references.

COMING OF AZO DYES. M. Schofield. Textile Weekly 58(1): 769-770 (Mar. 14, 1958). (1658)

The history of the discovery of diazo-compounds by Peter Griess and their applications in producing azo dyes, as well as intermediates in laboratory and in industry, is briefly reviewed.

REPLACEMENT OF INDIGO DYESTUFFS FOR USE ON NAVY WOOLEN FABRICS. PART 1. PRELIMINARY SURVEY. G. Bradley. U.S. Naval Supply Activities. Clothing Supply Office, Brooklyn, N.Y. July 1956. 12 p. Order from Library of Congress, Photoduplication Service, Washington 25, D.C. Microfilm $2.40, photostat $3.30. PB 125 941. (1659)

A historical review of the use of indigo by the Navy is presented. Various classes of wool dyestuffs are discussed as possible indigo replacements. Future lines of work are indicated.

DYES AND DYEING TECHNIQUES: REVIEW OF RECENT DEVELOPMENTS. A. J. Hall. Fibres 19: 71-76 (Mar. 1958). (1660)

AZO DYES FROM SUBSTITUTED 2-AMINOTHIOPHENS. J. B. Dickey, E. B. Towne, M S. Bloom, W. H. Moore, B. H. Smith, Jr., and D. G. Hedberg (Tenn. Eastman Co.). J. Soc. Dyers Colourists 74: 123-132 (Mar. 1958). (1661)

This paper concerns the effects of the position and the nature of substituents on the color of azo dyes derived from 2-aminothiophens. Data on dyeing and fastness properties of the dyes are included. Tables. Graphs. 12 references.

STUDY OF THE PHYSICAL STATE OF METHYLENE BLUE (C.I. BASIC BLUE 9) IN DYED FILMS AND ITS RELATION TO LIGHT FADING RATES. D. S. E. Campbell and C. H. Giles. J. Soc. Dyers Colourists 74: 164-168 (Mar. 1958). (1662)

APPLICATION OF DU PONT NAPHTHANIL BASES. Dyes & Chem. Tech. Bull. 14: 13-20 (Mar. 1958). (1663)

A new surface active agent, Alkanol HCS, improves stability and application properties of diazotized solutions of du Pont naphthanil bases. It assists in the production of cleaner package dyeings with improved fastness to crocking, and, when combined with sulfamic acid, stabilizes diazotized base solutions for continuous pad coupling. A detailed method for using the new surface active agent in both of these applications is given. Tables. Photomicrographs.

NEW METHOD FOR THE HIGH-TEMPERATURE DYEING OF ACRYLIC FIBERS. J. Khachoyan and J. P. Niederhauser. J. Soc. Dyers Colourists 74: 133-139 (Mar. 1958). (1664)

A new method of dyeing polyacrylonitrile fibers at high temperatures, in the presence of hydroxylamine sulfate, is described in detail. The hydroxylamine salt seems to modify the nitrile groups into new functions containing amino groups, which confer on the fiber affinity for soluble and insoluble dyes of different classes--acid, direct, metal-complex, phthalocyanine, etc. Tables. Graphs. 9 references.

DYE-UPTAKE METER FOR STUDIES OF DYEING KINETICS. E. Bakker and D. Patterson (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 74: 168-172 (Mar. 1958). (1665)

An apparatus for measuring the rate at which dye is transferred from dyebath to fiber is described. It differs from previous forms of apparatus in that no special device for circulating the solution through a separate observation cell is required. Instead, the observation cell is formed within the dyebath by two inverted periscopes facing each other at a fixed distance. A simple double-beam optical system provides a means of eliminating the effects of any drift in the output of the light source or in the sensitivity of the light-measuring system. The types of experiment which can be carried out with the apparatus are mentioned and some examples given. Photographs. Diagrams. Tables. 6 references.

WORSTED AND WOOLEN YARN DYEING. PART 1. MATCHING ON ANGOLA. Dyer 119: 463-464 (Mar. 28, 1958). (1666)

Procedures for decolorizing and redyeing angola yarns in solid shades are described.

WORSTED AND WOOLEN YARN DYEING. PART 2. DYEING YARNS FOR KNITWEAR. Dyer 119: 535-536 (Apr. 11, 1958). (1667)

The dyes used on wool and worsted yarn for knitted garments of good fastness to light and domestic washing are usually either of the acid milling class or the chrome color group. Procedures for achieving level shades with both types of dyes are outlined.

DYEING WOOL/CELLULOSE BLENDS WITH ALCIAN DYESTUFFS. Imp. Chem. Inds. Ltd. Textile Weekly 58(1): 1048 (Apr. 11, 1958). (1668)

NEW TECHNIQUES IN DYEING ACRILAN. W. H. Hindle. Modern Textiles Mag. 39: 54, 56 (Apr. 1958). (1669)

Acrilan 16 supplements the established form of Acrilan and is dyed only with disperse or cationic dyestuffs, or mixtures of the two classes. Because of the difference in dyeability between Acrilan and Acrilan 16, two-color or color-and-white effects can be obtained on a piece dye basis. Selected wool dyestuffs can be used to dye Acrilan into a full range of shades and leave Acrilan 16 either white or lightly stained. If a color-and-white effect is desired then the white of the Acrilan 16 may require to be cleared by means of a light sulfoxylate strip. The use of a one-bath dyeing process for Acrilan/rayon, and the Chem-Acril process for Acrilan/wool are also discussed.

INFLUENCE OF STEAMING TIME IN PAD-STEAM DYEING WITH MICRODISPERSE CIBANON DYES. M. Peter and P. Ulrich. Textil-Praxis (English ed.) No. 1: 33-34 (Mar. 1958). (1670)

Short steaming times are not only possible but also of advantage when applying microdisperse Cibanon dyes. Most favorable steaming times lie between 15 and 40 sec. Longer steaming times may cause fluctuations in shade, not only of reduction-sensitive dyes but also in a number of other products, where inferior coloring power may also result.

DYEING POLYAMIDE STRETCH YARNS WITH INDOCARBON DYES. C. Klopfstock. Rayonne et Fibres Synthet. 13, No. 6: 753-755 (1957). In French. Through BCIRA 37: 593 (1957). (1671)

A method is described for scouring Helanca yarn, and dyeing it with 7% Indocarbon CLG at a dye-liquor ratio of 1:50. These dyes are one group of the exceptional sulfur dyes with affinity for polyamide fibers; the shades obtained are fast to light and humidity and have a good resistance to rubbing in the dry and wet states.

DYEING OF DYNEL. B. Kramrisch. Fibres 19: 79-80 (Mar. 1958). (1672)

Following a brief description of the scouring, bleaching, and relustering of Dynel, the special techniques for its dyeing with disperse, acid, and Cibalan dyes are described.

SIMPLE TRIUMPHS OF APPLIED RESEARCH IN TINCTORIAL CHEMISTRY. J. Ogilvie (Allied Chem. & Dye Corp.). Dyestuffs 42: 165-174 (Mar. 1958). (1673)

TWO-TONE AND INGRAIN DYEING OF WOOL BY THE MAIFOSS PROCESS. Textile Recorder 75: 69-70 (Apr. 1958). (1674)

The theoretical and practical aspects of the Maifoss process are discussed, and some typical procedures are briefly outlined. The process, discovered by A. J. I. Harding, is protected by BP 680 862 and BP 740 003.

ANOMALOUS BEHAVIOR OF DIRECT DYES. H. E. Millson (Am. Cyanamid Co.). Am. Dyestuff Reptr. 47: P221-P234 (Apr. 7, 1958). (1675)

This paper is based on an experimental study undertaken to discover the factors causing the poor reproducibility obtained when cellulosic materials are dyed with direct dyes. Tables. Graphs. Color plates. 14 references.

DYEING: THEORY AND PRACTICE. PART 1. W. Postman. Dyestuffs 42: 139-154 (Mar. 1958). (1676)

This article explains, in relatively simple terms, the scientific basis of present-day dyeing theory. Its purpose is to help explain the "why" of some of the techniques used to effect successful dyeing. In Part 1 a general description of the textile fibers is given. 11 references.

IMPACT OF MANMADE FIBERS UPON THE DYEING INDUSTRY. A. H. Wilson (Courtaulds Ltd). J. Soc. Dyers Colourists 74: 120-122 (Mar. 1958). (1677)

The paper gives a brief survey of the various types of problems in dyeing manmade fibers, together with some general indication of lines of development which are likely to be most fruitful.

KLEINEWEFERS PRINTING MACHINE. H. Grahl. Textil-Praxis (English ed.) No. 1: 44-45 (Mar. 1958). (1678)

The unusual features of the machine are briefly described. Photograph.

SOME ASPECTS OF THE DYEING OF ACRYLIC FIBERS, WITH PARTICULAR REFERENCE TO THE PACK-DYEING OF COURTELLE. K. Meldrum and J. S. Ward (Courtaulds Ltd). J. Soc. Dyers Colourists 74: 140-150 (Mar. 1958). (1679)

The general features of the dyeing behavior and thermoplastic properties of acrylic fibers are discussed in relation to practical dyeing operations, in particular the pack- and package-dyeing of Courtelle in the form of loose fiber and slubbing. General and specific procedures for the application of disperse and basic dyes, consistent with the retention of good condition of the material, are suggested. Graphs. Tables.

PAD-JIG SYSTEM OF APPLYING VAT DYES TO LINEN CLOTH. J. N. F. Phillips. J. Soc. Dyers Colourists 74: 180-183 (Mar. 1958). (1680)

A practical description is given of a system of dyeing linen cloth with vat dyes by the pad-jig method. Stress is laid on the attainment of the highest possible absorbency during bleaching and other preparatory treatments for dyeing. Details of the padding mangles are given, and the danger of aggregation of dye as a result of the use of unsuitable padding oils is discussed.

DYEING OF ACRILAN AND WOOL/ACRILAN BLENDS. G. H. Lister. J. Soc. Dyers Colourists 74: 158-163 (Mar. 1958). (1681)

The acid-combining capacity of Acrilan was determined using sulfuric acid at 60° C. The influence of pH on the dyeing of Acrilan with acid dyes was examined, and the conditions required to obtain complete fiber penetration were determined. The effect on the wool component of the blend and on the wearing properties of the cloths of the low pH required to dye Acrilan/wool blends satisfactorily with acid dyes was investigated. The practical problems associated with the application of acid and chrome dyes in strongly acid dyebaths are discussed, and a dyeing method for their application is suggested. Graphs. 5 references.

UNION DYEING OF ACRILAN/WOOL BLENDS. W. H. Hindle. J. Soc. Dyers Colourists 74: 151-157 (Mar. 1958). (1682)

Early methods of dyeing Acrilan/wool blends in solid shades are outlined and the limitations stated. See also abstr. 137 (1958).

REDUCING DYEING TIMES FOR BLENDS OF ORLON ACRYLIC FIBER AND WOOL WITH THE DU PONT LN DYEING PROCESS. Dyes & Chem. Tech. Bull. 14: 10-12 (Mar. 1958). (1683)

Principles of the du Pont LN dyeing process applied in dyeing 80/20 blends of Orlon and wool have resulted in considerably reduced dyeing times and the use of a one-bath, one-step procedure.

A PRACTICAL APPROACH TO THE EVALUATION OF A FINISHING AGENT. J. J. McDonald and R. E. Morrison (Lowell Technological Inst.). Am. Dyestuff Reptr. 47: 211-212 (Apr. 7, 1958). (1684)

A simple and practical procedure for the evaluation of the effects on textile materials (particularly resin-treated fabrics) of a cationic chemical agent. Tables.

DYEING FABRICS CONTAINING METALLIC YARNS. R. J. Thomas. Dyes & Chem. Tech. Bull. 14: 21-26 (Mar. 1958). (1685)

CONTINUOUS DYEING BLEND FABRICS OF ORLON 42 AND COTTON. Dyes & Chem. Tech. Bull. 14: 41-49 (Mar. 1958). (1686)

Continuous procedures are suggested for preparing, dyeing, and finishing blends of 80% Orlon and 20% combed Egyptian or Pima cotton.

DYEING POLYACRYLONITRILE FIBERS WITH BASIC DYES. PART 2. W. Beckmann and O. Glenz. Melliand Textilber. 38, No. 7: 783-787 (1957). In German. Through BCIRA 37: 594 (1957). (1687)

Potentiometric titration of polyacrylonitrile fibers and their reaction with Melachite Green/carbinol base make it possible to determine quantitatively the acid groups in the fiber. Examination of the dyeing rate of basic dyes on the fibers led to a formula for the dyeing rate in dependence of dye concentration in dyebath and fibers, the saturation value, and the zeta potential. The dependence of the dyeing rate on the temperature can be expressed by an exponential function. The formula gives values in good agreement with those determined by measurements.

PRODUCTION OF LEVEL DYEINGS: THE MIGRATION FACTOR. Texture 5: 11-13 (Mar. 1958). (1688)

It is pointed out that the manner and degree to which dyes migrate in a dye liquor containing absorbent textile material will be governed partly by the nature of the dye and partly by the character of the material. These and other factors influencing dye migration and, consequently, levelness of dyeing are discussed.

EFFECT OF SOLVENTS IN DYEING. L. Peters and C. B. Stevens (Leeds Univ.). (Letter to the editor). J. Soc. Dyers Colourists 74: 183 (Mar. 1958). (1689)

PRODUCING SCREENS FOR SCREENPRINTING BY DOUBLE EXPOSURE. R. Künzl. Textil-Praxis (English ed.) No. 1: 46-48 (Mar. 1958). (1690)

SCREEN PRINTING. A. Franken. Rayonne et Fibres Synthet. 13, No. 6: 757-770 (1957). In French. Through BCIRA 37: 596 (1957). (1691)

Screen printing equipment is reviewed, with reference to new developments.

PHYSICOCHEMICAL PROCESSES IN VAT PRINTING. G. Troeltzsch. Melliand Textilber. 38, No. 7: 801-805 (1957). In German. Through BCIRA 37: 595 (1957). (1692)

The author discusses the physicochemical processes taking place during vatting of vat dyes: (1) reduction of the dye to its leuco base (enol-keto rearrangement) and interaction between the leuco-vat dye and the fiber (diffusion rate and adsorption); (2) measurement of the redox potential; (3) properties required of a good printing dye; (4) effect of sol-gel ratio of the printing paste (the gel acting as dye carrier and the sol as distributor) on the depth of color and uniformity of the print.

SCREEN PRINTING MOSAIC. PART 2. A. Franken. Tex 16, No. 7: 917-919 (1957). In Dutch. Through BCIRA 37: 596 (1957). (1693)

Various systems of screen printing machines are reviewed.

GROUND COLORS FOR DISCHARGE. Dyes & Chem. Tech. Bull. 14: 27-40 (Mar. 1958). (1694)

Du Pont dyes suitable for discharge are reviewed to make available up-to-date information on resin-treated, lightfast shades. Consideration has been given to the use of dyefixing agents for improving washfastness and bleed-off of direct dyes used in discharge work.

PRINTING OF HANK YARN. PART 2. W. Sonnenschein. Textil-Praxis 12, No. 5: 470-478 (1957). In German. Through BCIRA 37: 595 (1957). (1695)

The author discusses the raw materials used for hank printing and describes the customary printing methods with vat dyes, leuco-esters of vat dyes, coupling dyes, oxidation dyes, developing dyes and pigment dyes for cotton and regenerated cellulose; acid, metal complex, mordant, substantive, vat, and leuco-esters of vat dyes for wool and silk; disperse, acid and vat dyes for cellulose acetate fibers; acid, direct, disperse, metal complex, vat and pigment dyes for polyamide fibers; disperse, basic metal complex, vat and pigment dyes for polyacrylonitrile; disperse and pigment dyes for polyester fibers. See abstr. 145/58 for Part 1.

MACHINE FOR ORBIS PRINTING PROCESS. L. E. Muehleisen. Melliand Textilber. 38, No. 7: 800-801 (1957). In German. Through BCIRA 37: 595 (1957). (1696)

The Orbis printing process consists in the preparation of prints in any desired number of colors in one operation and with a single printing roller. The new MPD-Universal printing machine described, developed for this purpose, consists of a printing machine, a dryer, and a winding device. It can be used for the preparation of multicolored prints, printing of pin-stripes, roller printing in two colors with engraved steel or copper rollers, warp printing (sizing, printing and drying takes place in one operation), pigment-printing, etc.

TEXTILE ASSISTANTS. PART 4. AUXILIARY PRINTING AGENTS. G. Rivat. Rev. Textile 56, No. 5: 318-326 (1957). In French. Through BCIRA 37: 594 (1957). (1697)

Thickeners, wetting agents, solvents causing swelling of the fibers, dye-fixing agents, mordants, discharging, stripping and oxidizing assistants, stabilizing, fiber-protecting and sequestering agents, washing assistants, developers, resist agents, hygroscopic and hydrotropic products, antifoaming agents, optical bleaches, and delustering agents are discussed, with reference to commercial products, suitable compositions, and methods of application.

MECHANICAL PROCESSES D 3

DEVELOPMENTS IN THE FIELD OF SHEARING. K. Härtel. Reyon, Zellwolle u. Chemiefasern No. 7: 504-506 (1957). In German. Through BCIRA 37: 597 (1957). (1698)

SGP CLOTH CLEANING AND SHEARING MACHINE. A. Monforts Maschinenfabrik. Textil-Praxis (English ed.) No. 1: 42-44 (Mar. 1958). (1699)

An outstanding feature of the SGP machine is that the cleaning section is an independent unit. The idea behind this arrangement is that in many types of materials, especially cloth as it comes from the loom, the initial cleaning is of decisive importance for shearing efficiency. Structure and operation of the machine are described. Diagram.

DRYING D 4

TRENDS IN THE DEVELOPMENT OF CLIPS AND PINS FOR TENTERS. E. Richter. Textil-Praxis 12, No. 6: 585-590 (1957). In German. Through BCIRA 37: 598 (1957). (1700)

Improvements in tenter clips and pins, raw materials used in their construction, and their lubrication are discussed.

VELOCITAIR TENTERING MACHINE. E. Gordon Whiteley Ltd. Dyer 119: 322-323 (Feb. 28, 1958). (1701)

Features of the mark III Velocitair high efficiency tentering machine are described. Photographs.

TRICOT DRYING IN A NEW MANNER. E. Kiefer. Melliand Textilber. 38, No. 6: 677 (1957). In German. Through BCIRA 37: 598 (1957). (1702)

The use and advantages of the Fleissner perforated cylinder dryer for drying tricot fabrics are described. A drying time of 60-90 sec is required to reduce the moisture content from 80 to 5% (as compared with 60-90 min in the case of the festoon dryer).

FLEISSNER DRYER. H. Kittel. Melliand Textilber. 38, No. 6: 674-676 (1957). In German. Through BCIRA 37: 597 (1957). (1703)

A new perforated cylinder dryer operating on the nozzle principle is described. The dryer is very short and narrow and requires a drying time of 1-2 min for loose woolen material and 2/3 min for cotton, at a steam consumption of only 1.4 kg/kg water to be evaporated.

TESTING AND MEASUREMENT E

ABRASION TESTERS FOR SINGLE FIBERS AND FINE YARNS. F. Dillmann. Reyon, Zellwolle u. Chemiefasern No. 9: 627-630 (1957). In German. Rayonne et Fibres Synthet. 13, No. 9: 1123-1132 (1957). In French. Through BCIRA 37: 772 (1957). (1704)

The two abrasion testers described (the length abrasion tester for single fibers and the loop abrasion tester for fibers and yarns) can be successfully used in comparative tests on fibers that have been subjected to chemical and thermal treatments. In connection with microscopical examination (without laborious preparation), the effect of the finishing processes can be determined fairly rapidly.

ON THE ESTIMATION OF THE STANDARD DEVIATION OF A NORMAL DISTRIBUTION FROM A PAIR OF PERCENTILES. M. Sandelius (Swedish Inst. for Textile Research). Skandinavisk Aktuarietidskrift: 85-88 (1957). (1705)

A method for estimating population standard deviation from percentiles is described. The resulting loss in statistical efficiency of this short-cut method is evaluated against standard procedures.

MULTIPLE COMPARISONS IN ANALYSIS OF VARIANCE. D. L. Wallace. Am. Soc. for Quality Control. Nat. Convention Trans.: 279-285 (1957). (1706)

The multiple comparisons procedure requires the determination of wholly significant differences, which are used to modify the confidence limits obtained from Student's "t" distribution. Thus a basis is provided for making comparisons in a multiple-comparisons variance analysis.

WORKSHEET GIVES OPTIMUM CONDITIONS USING BOX METHOD. C. H. Li (Radio Corp. of Am.). Chem. Eng. 65: 151-156 (Apr. 7, 1958). (1707)

A relatively new method of experimentation for the rapid determination of optimum processing conditions for a number of interacting curvilinear or linear variables. 3 references.

USE OF SLIDE RULES IN TEXTILE CALCULATIONS. K. Mamnicki. Hosiery Trade J. 65: 102-103 (Apr. 1958). (1708)

It is pointed out that in addition to alignment charts or nomograms, specialized slide rules are another way of simplifying calculations. The construction and use of a specialized scale for use with yarn speed meter readings is demonstrated. Diagrams.

PHYSICAL TEXTILE TESTING. [MECHANISCH-TECHNOLOGISCHE TEXTILPRUFUNGEN]. 7th ed. E. Wagner. Spohr-Verlag, Wuppertal-Elberfeld, Germany. 1957. 228 p. In German. (1709)

Covers general principles of sampling and methods of test of raw materials, yarns, and fabrics.

METHODS OF TESTING TEXTILES. METHOD 5A: WEIGHT OF FABRICS. METHOD 5B: YARN NUMBER. Can. Textile J. 75: 61-62 (Mar. 21, 1958). (1710)

Method 5A describes a procedure for determining the conditioned weight of fabrics in the laboratory. Method 5B describes the determination of the relationship between the weight and length of the yarn tested and is expressed in yd per lb and g per 9,000 m.

SIMPLE DEVICE FOR DETERMINING MOISTURE CONTENT. E. Hummel. Textil-Praxis (English ed.) No. 1: 38-41 (Mar. 1958). (1711)

The August Sauter KG ASE 719 precision balance is similar to a postal scale and is used for determining the weight of test specimens before and after drying by infrared heat. Data obtained by the Sauter balance are compared with those obtained by the oven drying system. Table. Graphs.

FIBERS E 1

FIBER TESTING DEVICE. Spinner u. Weber 75, No. 7: 310-311 (1957). In German. Through BCIRA 37: 602 (1957). (1712)

An automatic staple-length measuring apparatus is described.

EXAMINATION OF THE TEST LENGTH AND MINIMUM FIBER LENGTH DURING TENSILE TESTING OF FIBERS. H. Perner. Faserforsch. u. Textiltech. 8, No. 5: 197-198 (1957). In German. Through BCIRA 37: 602 (1957). (1713)

The minimum fiber length necessary for the test is: $L_M = L_E + L_K + L_F$, where L_M is the minimum fiber length (in mm), L_E the free test length according to the DIN specification (in mm), L_K the fiber length nipped by the two clamps (mm), and L_F the free fiber ends (mm). For short-stapled cotton qualities, it is recommended that the fibers should be presorted on a stapling apparatus to remove all fibers shorter than the minimum fiber length.

METHOD OF MEASURING POISSON'S RATIO OF FIBERS. F. I. Frank and A. L. Ruoff (Cornell Univ.). Textile Research J. 28: 213-217 (Mar. 1958). (1714)

An apparatus is described whereby Poisson's ratio (lateral strain divided by longitudinal strain) may be measured for fibers whose diameter is approximately 250μ. The apparatus is used in conjunction with an Instron testing machine so that stress vs strain measurements can be made at the same time Poisson's ratio vs strain measurements are made. The measurements can be made statically or on fibers undergoing a constant rate of extension. Diagrams. Graphs. 4 references.

IDENTIFICATION OF CHEMICAL FIBERS. Chem. Prod. 20: 33-34 (1957). Through J. Appl. Chem. 7, Part 6: i-516 (1957). (1715)

The microfusion technique of fiber identification is based on determination of the melting point, and eutectic melting point with p-nitrophenol, of a sample which is covered with silicone oil, placed on a Koffler hot stage, and viewed by transmitted ordinary and polarized light.

WHAT AN ULTRAVIOLET REFLECTANCE CURVE CAN TELL ABOUT A TEXTILE MATERIAL. PART 1. FIBER IDENTIFICATION. G. Thomson, C. A. Lermond, and R. A. Kenney (Fabric Research Labs.). Am. Dyestuff Reptr. 47: P267-P272 (Apr. 21, 1958). (1716)

The ultraviolet reflectance characteristics of 20 different fibers have been determined. They are sufficiently different to serve not only as an aid in identification but also to determine the type of bleach used, presence or absence of a delustrant, effect of chemical treatment and finishes, and the effect of heat and light. Graphs.

NEW METHODS OF EXAMINING FIBER SECTIONS UNDER THE ELECTRON MICROSCOPE. P. Kassenbeck and M. Leveau. Bull. Inst. Textile France No. 67: 7-17 (May 1957). In French. Summary in BCIRA 37: 602 (1957). (1717)

CHEMICAL ANALYSIS OF BLENDS OF DACRON WITH COTTON AND RAYON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 2 p. Bull. D-93 (replaces Bull. D-85). Free. (1718)

ECONOMIC EVALUATION OF COLOR IN DOMESTIC WOOL. F. J. Poats and W. Fong. U. S. Agri. Mktg. Serv., Washington 25, D. C. Nov. 1957. 35 p. Mktg. research report no. 204. Order from Superintendent of Documents, Washington 25, D. C. 25¢. (1719)

The importance of wool color is evaluated in relation to marketing and quality. Physical measurements of wool color and the development and use of a wool comparator are discussed.

YARNS E 2

METHOD FOR MEASURING YARN SOFTNESS AND ITS USE TO SHOW THE EFFECT OF SINGLE AND PLY TWIST ON THE SOFTNESS OF 31/2 COTTON YARNS. E. L. Skau, E. Honold, and W. A. Boudreau (Southern Regional Research Lab.). Textile Research J. 28: 206-212 (Mar. 1958). (1720)

An apparatus is described for measuring yarn softness in terms of the percent increase in yarn width when the yarn is subjected to lateral pressure between two parallel plane surfaces. Softness data obtained on a family of 31/2 cotton yarns have been presented as a contour diagram which, in connection with similar contour diagrams of other important yarn properties, shows the interrelationship of these properties over a wide range of single and ply twist combinations. Graphs. 2 references.

NEPS MEASURED BY STANDARD PHOTOS. G. Nordhammar and K.-E. Erickson (Swedish Inst. for Textile Research). Textile Inds. 122: 108-110 (Apr. 1958). (1721)

Basically this method is similar to that used for grading yarn with the ASTM photographic yarn appearance charts. A sample of the card web is taken on a sampling plate of approximately 5 x 8 in. This sample is placed against a black background and compared to a set of five standard photographs showing various grades of neppiness. Photographs. Graph.

TESTING OF COTTON YARNS FOR BREAKING STRENGTH. H. A. Mereness. Inst. of Textile Technol., Charlottesville, Va., Nov. 6, 1957. 9 p. ITT report no. 16. (1722)

The nature of breaking strength values is examined.

TEX SYSTEM FOR NUMBERING TEXTILE FIBERS, THREADS, AND YARNS. German Standards Comm. Melliand Textilber. 38, No. 6: 642-644 (1957). In German. Through BCIRA 37: 607 (1957). (1723)

The draft specification DIN 60 905 (corresponding in its content to a suggestion of an ISO-draft recommendation) describes the application range, the units of the system, the manner of expressing the number of single fibers, threads and yarns (with examples), and the determination of approximate tex values (formulas for the conversion of other yarn numbering systems are specified in DIN 60 910). The manner in which the tex system is to be introduced and general principles are outlined.

TEX UNIVERSAL YARN NUMBERING SYSTEM. L. Szponder. Textile Inds. 122: 149, 151 (Apr. 1958). (1724)

The advantages of the tex system are discussed, and formulas for calculating tex or converting to tex from other systems are given.

METHODS OF TESTING TEXTILES. METHOD 8: TWIST IN YARNS. Can. Textile J. 75: 67-68 (Apr. 18, 1958). (1725)

This method describes a procedure for determining the amount and direction of twist in textile yarns other than core yarns and monofilaments.

SOME NOTES ON THE HANK STRENGTH TEST. N. Richards (Wool Inds. Research Assoc.). J. Textile Inst. 49: T131-T147 (Mar. 1958). (1726)

The hank strength test is discussed assuming that the hank consists of a given number of threads of equal length gripped at each end, and that, throughout the test, the threads are subjected to uniform extension. The maximum load supported by such a hank is shown to depend on the breaking extension distribution, the regression of breaking load on breaking extension, and the shape of the load-extension curves of the single threads. It is shown that the hank strength test should not, in general, be used as a substitute for the single-thread strength test. Graphs. Tables. 3 references.

ARE THE RESULTS FROM USTER YARN REGULARITY TESTS COMPARABLE? H. Köb. Melliand Textilber. 38, No. 7: 745-748 (1957). In German. Through BCIRA 37: 607 (1957). (1727)

Comparative tests carried out under practical conditions on 24 Uster regularity testers in textile plants showed that, when treated properly, the devices show satisfactory agreement (within $\pm 4\%$); for control purposes, however, it is recommended to use only the new red standard films for a reliable correction. A series of measurements on yarns showed that each cop from one doffing has its specific irregularity value, and a reliable mean value can only be obtained by testing a large number of samples.

SLIDE RULE FOR CORRECTING USTER EVENNESS CALCULATIONS. P. W. Mullen (E. I. du Pont de Nemours & Co.). (Letter to the editor). Textile Research J. 28: 272-273 (Mar. 1958). (1728)

This letter describes a slide rule developed in 1952 to eliminate the need of reference tables and to reduce calculation time. The rule is applicable to the correction of average maximum percent unevenness results using the Uster chart range method and to the calculation of average linear percent unevenness using the integrator method. Table. Diagram. 5 references.

FABRICS E 3

INVESTIGATIONS INTO THE BEHAVIOR OF TEXTILES TO COLD. PART 1. GENERAL VIEWPOINTS ON CARRYING OUT TESTS AT LOW TEMPERATURE. PART 2. CHANGES IN THE TENSILE STRENGTH OF FABRICS FROM VARIOUS FIBERS IN THE COLD. H. Sommer and R. Barth. Faserforsch. u. Textiltech. 8, No. 5: 171-179; No. 6: 211-222 (1957). In German. Summary in BCIRA 37: 608 (1957). (1729)

METHOD FOR REMOVING COTTON OR VISCOSE IN THE ANALYSIS OF FABRICS CONTAINING NYLON BLENDS. W. S. Sondhelm and H. Webster. (Letter to the editor). J. Textile Inst. 49: T171-T172 (Mar. 1958). (1730)

TEST FOR DIMENSIONAL CHANGES IN WOVEN FABRICS IN HIGH-TEMPERATURE LAUNDERING. W. D. Appel. Am. Dyestuff Reptr. 47: P213-P220, P240 (Apr. 7, 1958). (1731)

This paper summarizes the results of a study of a test for dimensional changes in woven fabrics in laundering carried out in the International Organization for Standardization. Twenty laboratories in fifteen countries participated. Tables. Graphs. 2 references.

ARTIFICIAL ACCELERATED AGING OF COTTON FABRICS DYED WITH SULFUR BLACK. Z. I. Sergeeva and I. L. Khmelnitskaya. Tekstil. Prom. 17, No. 6: 42-44 (1957). In Russian. Through BCIRA 37: 609 (1957). (1732)

The method described was developed to study the stability of sulfur dyes and their effect on dyed fabrics during storage. The accelerated aging treatment was carried out in an electrically-heated, thermostatically-controlled cylindrical air chamber (30 l capacity), determining every 5 hr, on samples of the fabric treated, the mechanical strength, copper number, and pH of the aqueous extract of the fabric. The fabric dyed with Sulfur Black K (dinitrophenol derivative) showed most damage, while the fabric dyed with direct Black 3C hardly differed, as regards strength properties, from the initial undyed fabric.

CLOTH MEASURING AND LAPPING MACHINES. Melliand Textilber. 38, No. 7: 809-811 (1957). In German. Through BCIRA 37: 608 (1957). (1733)

Various constructions are described and illustrated.

SUMMARY OF SPECIFICATION REQUIREMENTS FOR MILITARY FABRICS. E. B. Armstrong. U. S. Army. Quartermaster Research & Development Command. Textile, Clothing & Footwear Div., Quartermaster Research & Development Center, Natick, Mass. Revised. Dec. 1957. 296 p. Order from Office of Technical Services, Washington 25, D. C. $4.00. PB 131 640. (1734)

Specification requirements for military fabrics are summarized in tables which give details for yarn, fabric, and finish. Included are finishing and aftertreatment specifications, and test methods.

OTHER E 4

IDENTIFICATION AND ESTIMATION OF PHENOLIC FUNGICIDES IN MILDEWPROOF MATERIALS. C. L. Hilton (U. S. Rubber Co.). Textile Research J. 28: 263-266 (Mar. 1958). (1735)

An ultraviolet spectrophotometric method was developed for the analysis of many of the commercial phenolic fungicides. Accuracy and precision of $\pm 3\%$ have been obtained. The ultraviolet absorption spectra of twelve compounds (thirty commercial fungicides) are included. Graphs. Table. 10 references.

NEW OFFICIAL AATCC TERMS FOR FASTNESS RATING. AATCC. Dyes & Chem. Tech. Bull. 14: 7-9 (Mar. 1958). (1736)

CARBON-14 METHOD TESTS TO DETERMINE EFFECTIVENESS OF SOAPS AND DETERGENTS. F. Ehrenkranz and E. H. Jebe (Iowa State Coll.). Soap Chem. Specialties 34: 47-50, 163 (Apr. 1958). (1737)

Results are reported for four experiments designed primarily to give information on the relative effectiveness of synthetic detergents and soaps in hard (25 grain) and softened (0 to 0.5 grain) wash and rinse waters and on synthetic detergents in hard wash water with hard vs softened rinse water. The test samples were cotton and Dacron swatches soiled with a solution of carboxyl-tagged tripalmitin in olive oil. The swatches were washed in four home washers. Photograph. Tables. 4 references.

CAUSES OF RELATIVE ERRORS IN DETERMINING THE SOLUBILITY NUMBER OF FLAX. A. Parisot and S. Parisot. Bull. Inst. Textile France No. 67: 71-83 (May 1957). In French. Through BCIRA 37: 605 (1957). (1738)

The study concerns the errors that can arise in the determination of the solubility number as a result of faulty apparatus and of the measurements being carried out by several operators in the same or in different laboratories.

EVERYDAY CHEMICAL TESTING OF TEXTILES. G. Rordorf. Spinner u. Weber 75, No. 7: 303-305; No. 10: 510-514 (1957). In German. Through BCIRA 37: 602 (1957). (1739)

In this review, the author describes tests on water, fibers (defects and damages), and textile assistants, carried out in plant laboratories.

INDUSTRIAL ENGINEERING F

HOW TO CONTROL WASTE. J. Middleton. Textile Inds. 122: 129-131 (Apr. 1958). (1740)

Recommendations based on practical experience are given for establishing an effective waste control program.

WHAT REPORTS DOES MANAGEMENT NEED? F. H. Drewes. Textile Inds. 122: 120-123 (Apr. 1958). (1741)

Report of a survey of necessary and unnecessary forms, records, and reports for top management. Sample forms are included.

DESIGN OF A FINISHING PLANT. Textile Inds. 122: 111-113 (Apr. 1958). (1742)

Factors in the selection of an ideal site for a finishing plant, as well as building location and construction are discussed. Diagram.

ACCURACY CONSIDERATIONS FOR CAPITAL COST ESTIMATION. H. C. Bauman (Am. Cyanamid Co.). Ind. Eng. Chem. 50: 55A-58A (Apr. 1958). (1743)

Use of statistical sampling techniques for cost estimation and evaluation.

WASTE CONTROL. PART 2. W. Sproule. Textile Bull. 84: 56-57 (Apr. 1958). (1744)

The personnel necessary for setting up and maintaining an effective waste control program, as well as check points for locating sources of discrepancies in waste reports, are discussed.

ON THE DETERMINATION OF THE OPTIMAL OPERATING LEVEL IN A TEXTILE MANUFACTURING FACTORY. Y. Osawa (Osaka Univ.). Osaka Prefectural Institute for Industrial Management, Bungomachi Higashiku, Osaka, Japan. Industrial administration research memorandum 1, No. 5: 1-9 (June 20, 1955) (1745)

This paper deals with the derivation of optimal operating level of a factory in which many brands of textile goods are manufactured. Linear programming technique is applied to resolving the conflicting requirements among market prices, manufacturing costs, and maintenance expenses of the factory. Formulation of the model shows how the change of condition caused by reduction of production levels can be studied as linear programs. Tables. Diagram.

WASTE DISPOSAL F 2

EFFLUENT PURIFICATION OF A BLEACHING AND DYEING PLANT. J. Wittmann. Melliand Textilber. 38, No. 6: 679-680 (1957). In German. Through BCIRA 37: 611 (1957). (1746)

General principles of an effluent purification plant are discussed and directions are given for the waste water treatment.

QUALITY CONTROL F 3

SQC APPLICATIONS IN TEXTILE INDUSTRY. C. S. Arunachalam (Mysore Spun Silk Mills Ltd). Bull. Quality Control Assoc., Bangalore 1: 15-16 (May 1954). (1747)

A silk ring spinning operation was studied statistically, and improved quality was achieved.

QUALITY CONTROL ENGINEERING FOR MODERN MASS PRODUCTION. N. L. Enrick (Inst. of Textile Technol.). Paper presented at meeting of Richmond, Va. Sect. of Am. Soc. for Qual. Control, Feb. 1958. 17 p. Available from Inst. of Textile Technol. Charlottesville, Va. (1748)

Organizational and managerial aspects of quality control, with instructions for installation of a quality control program in an industrial plant, including single and sequential sampling, frequency distribution analysis, and control charts. Tables. Graphs. 7 references.

HOW BINOMIAL PROBABILITY SOLVED FIVE WOOL PROBLEMS. A. J. Gagnon, Jr. Textile World 108: 72-73, 170 (Apr. 1958). (1749)

Binomial-probability paper is a special graph paper with many useful applications in quality control. Details of the following wool processing problems solved by its use are given: determining the effectiveness of a new scouring agent; combing time study; sliver quality control; yarn size variations; and testing for bad packages.

QUALITY CONTROL IN THE BLOW ROOM. P. N. Iyer (Mysore Spinning & Mfg. Co. Ltd). Bull. Quality Control Assoc., Bangalore 1: 17 (May 1954). (1750)

Improved quality was obtained from opening and picking quality control.

APPLICATIONS OF SQC PROGRAMME TO SPUN SILK INDUSTRY. C. S. Arunachalam (Mysore Spun Silk Mills Ltd). Bull. Quality Control Assoc., Bangalore 1: 22-23 (May 1954). (1751)

Improvements in roving frame stock weight variations were achieved by means of statistical control charts.

SCIENCES G

CHEMISTRY G 1

ALKALINE DEGRADATION OF POLYSACCHARIDES. PART 1. SOLUBLE PRODUCTS OF THE ACTION OF SODIUM HYDROXIDE ON CELLULOSE. G. N. Richards and H. H. Sephton. J. Chem. Soc.: 4492-4499 (Nov. 1957). (1752)

ALKALINE DEGRADATION OF POLYSACCHARIDES. PART 2. ALKALI-STABLE RESIDUE FROM THE ACTION OF SODIUM HYDROXIDE ON CELLULOSE. G. Machell and G. N. Richards. J. Chem. Soc.: 4500-4506 (Nov. 1957). (1753)

THE DEGRADATION OF CELLULOSE BY AQUEOUS SODIUM HYDROXIDE AT 170°. W. M. Corbett and G. N. Richards. Svensk Papperstidning 60, No. 21: 791-794 (Nov. 15, 1957). In English. Through Battelle Tech. Rev. 7: 230a (Mar. 1958). (1754)

Comparison of the major soluble products from cotton cellulose with those from the progressive stepwise alkaline degradation of hydrocellulose obtained by chain scission of the original cellulose molecules.

X-RAY STUDY OF THE COMPOUNDS FORMED BY BASIC DYES WITH ACIDIC OXYCELLULOSES AND ALGINIC ACID. J. O. Warwicker (Shirley Inst.). J. Textile Inst. 49: T148-T169 (Mar. 1958). (1755)

Characteristic patterns due to the dye have been found in x-ray fiber photographs of acidic oxycelluloses and alginic acid dyed with basic dyes. An explanation of the extra pattern due to the dye has been advanced on the supposition that dye cations bound to carboxyl groups on adjacent chains can associate together by van der Waals forces and thus form a diffracting system. Diffraction patterns. Tables. 12 references.

SOILING OF CARPETS. R. C. Cheetham (Courtaulds Ltd). Dyer 119: 469-470 (Mar. 28, 1958). (1756)

The presence of oil or grease on the pile fiber is a prime cause of high rate of soiling of the carpet. The use of self scouring oils in processing carpet yarns on the woolen system is discussed, and other factors relevant to soiling are cited.

STUDIES ON THE SORPTION OF MOISTURE BY POLYMERS. PART 1. EFFECT OF CRYSTALLINITY. L. Valentine (Leeds Univ.). J Polymer Sci. 27: 313-333 (Jan. 1958). (1757)

The relation between the sorption of moisture by polymers and their crystalline structure is reviewed, and it is concluded that, if a dry polymer can form well-defined crystallites, then these crystallites will usually be inaccessible to water vapor. The ratio of the moisture sorption of a polymer to that of its completely amorphous form will thus be a measure of the noncrystalline fraction. Methods of estimating the sorption of the amorphous form of a polymer that is normally partially crystalline are then discussed. Graphs. Tables. 55 references.

BASIC CHEMISTRY OF TEXTILE COLORING AND FINISHING. S. R. Cockett and K. A. Hilton. Nat. Trade Press Ltd, London, England. 1955. 191 p. $2.95. (1758)

BASIC CHEMISTRY OF TEXTILE PREPARATION. S. R. Cockett and K. A. Hilton. Nat. Trade Press Ltd, London, England. 1955. 197 p. $2.94. (1759)

THERMODYNAMIC PROPERTIES OF SOLUTIONS OF CELLULOSE DERIVATIVES. PART I. DILUTE SOLUTIONS OF SECONDARY CELLULOSE ACETATE. W. R. Moore and B. M. Tidswell (Bradford Inst. of Technol.). J. Polymer Sci. 27: 459-472 (Jan. 1958). (1760)

SURFACTANTS LISTED: SYNTHETIC DETERGENTS AND EMULSIFIERS UP TO DATE. 4th revision. PART 5. J. W. McCutcheon. Soap Chem. Specialties 34: 54-67 (Apr. 1958). (1761)

TEXTILE AUXILIARIES: CATION-ACTIVE PRODUCTS. Texture 5: 14-17 (Mar. 1958). (1762)

The use of cation-active products for increasing fastness of dyeings, for softening, and for delustering is discussed.

NOTE ON THE MOLECULAR WEIGHT OF TWO SEED HAIR CELLULOSES. T. E. Timell (Pulp & Paper Research Inst. of Canada). (Letter to the editor). Textile Research J. 28: 270-271 (Mar. 1958). (1763)

Results of an investigation on milkweed floss and kapok are reported. Tables. 9 references.

USE OF RADIOACTIVE TRACERS IN THE STUDY OF SOIL REMOVAL AND DETERGENCY. E. B. Ashcraft (Westinghouse Research Labs.). Symposium on radioisotopes, p. 30-41. Am. Soc. for Testing Materials, 1916 Race Street, Philadelphia 3, Pa. 1956. ASTM special tech. pub. no. 215. $2.75. (1764)

Experiments are described using radioactive tracers to determine removal of separate soil components, effect of detergent concentration, and the results of multiple washing. The literature is reviewed. 30 references.

PHYSICS G 2

USES OF RADIOISOTOPES IN THE TEXTILE INDUSTRY A SELECTED BIBLIOGRAPHY. L. L. Covert. Nat. Research Council, Ottawa, Canada. Sept. 1957. 8 p. Technical Information Service report no. 54. (1765)

21 annotated references are given.

GRAFT COPOLYMERS: A NEW TECHNOLOGY? D. J. Metz (Brookhaven Nat. Lab.). Nucleonics 16: 73-77 (Apr. 1958). (1766)

Copolymers that have been made in the laboratory with the use of radiation appear to have useful properties as ion-exchange membranes, high-temperature dielectrics and water-resistant fabrics. Surface grafting, a new technique, offers the possibility of using one plastic to protect another much as plating protects metals. Graphs. 11 references.

BIOLOGY G 3

PHYSICAL AND CHEMICAL INTERACTION BETWEEN TEXTILES AND HUMAN SKIN. A. Sippel. Textil-Praxis 12, No. 6: 595-600 (1957). In German. Through BCIRA 37: 608 (1957). (1767)

In this review, the author discusses the purely physical and physicochemical effects of textiles on the skin (pressure; friction; heat conductivity; light permeability; electrostatic charge; effect of chemical substances; secretion products; moisture exchange). 21 references.

PHYSIOLOGICAL PROPERTIES OF WOOLEN TEXTILES. O. Mecheels. Melliand Textilber. 38, No. 5: 527-531; No. 6: 645-648 (1957). In German. Through BCIRA 37: 609 (1957). (1768)

The hygienic properties of wool fibers and effects of chroming and chlorination on their physiological properties (water economy, stabilization against microorganisms of human skin) are discussed.

MITIN TOXICITY. D. J. Ott (Geigy Chem. Corp.). Am. Textile Reptr. 72: 73, 75 (Apr. 24, 1958). (1769)

The mothproofing agent Mitin has been subjected to series of tests which have proven that it is nontoxic to humans and animals. The results of these tests are briefly reported.

MISCELLANY H

CHEMICAL TRENDS IN THE TEXTILE INDUSTRY. M. Harris (Harris Research Labs.). Am. Dyestuff Reptr. 47: P263-P264 (Apr. 21, 1958). (1770)

The textile industry is currently consuming about 2.3 billion dollars worth of chemicals annually. Because the textile industry is primarily a mechanical industry, the chemical industry has tended to assume leadership in this area. Greater progress could be achieved by closer cooperation and coordination between the two industries.

REVIEW OF MACHINERY DEVELOPMENTS DURING 1957. Textile Merc. 138: 27-35 (suppl., Mar. 1958). (1771)

Spinning, yarn preparation, weaving, knitting, dyeing, finishing, and tufting machinery, as well as quality control instruments, are briefly reviewed.

ENCYCLOPEDIA OF FABRICS. Texture 5: 49-51 (Mar. 1958). (1772)

Additional fabric terms are described and defined.

REPORT OF THE DIRECTOR OF RESEARCH FOR 1957-58. Wool Inds. Research Assoc., Torridon, Headingley, Leeds 6, England. 1958. 30 p. WIRA publication no. 211. (1773)

Following a report on research projects is a bibliography of WIRA publications and lectures for 1957, as well as a list of forthcoming publications.

RESEARCH AND THE FUTURE OF THE TEXTILE INDUSTRY. R. Stevens (Arthur D. Little, Inc.). Am. Dyestuff Reptr. 47: P265-P266 (Apr. 21, 1958). (1774)

Rigorous competition and narrow profit margins make survival dependent on ability to combine technological skill with sound business practices.

PRESENT STATE OF TEXTILE RESEARCH. M. Campbell. Can. Textile J. 75: 65-68 (Apr. 4, 1958). (1775)

The types of textile research being done by textile mills, government agencies, and universities are discussed. The importance of a research evaluator to bridge the gap between the researcher and mill man is emphasized.

TEXTILE RESEARCH IN GERMANY. Forschungskuratoriums Gesamttextil. Spinner u. Weber 75, No. 10: 499-501; No. 11: 550-553 (1957). In German. Through BCIRA 37: 615 (1957). (1776)

This report is a review of the research work during 1955/56, covering raw materials; spinning; weaving and knitting; bleaching, dyeing, and printing; finishing; wear problems; textile testing. Textile research institutes are listed.

THE COTTON INDUSTRY IN HONG KING. Textile Recorder 75: 58-60 (Apr. 1958). (1777)

The origin, growth, and development of the modern cotton industry in Hong Kong are outlined. Photographs.

A NEWCOMER'S IMPRESSION OF THE SPINNING INDUSTRY. A. E. De Barr. J. Textile Inst. 49: P89-P98 (Mar. 1958). (1778)

A lecture. A scientist looks at the textile industry and the state of research on spinning processes.

A NEWCOMER'S IMPRESSION OF THE SPINNING INDUSTRY. F. Charnley. Reply: A. E. De Barr. (Letters to the editor). J. Textile Inst. 49: P107-P109 (Mar. 1958). (1779)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

CRIMPED YARN. J. A. Place (to Brit. Nylon Spinners Ltd). BP 761 084, Nov. 7, 1956. Through BCIRA 37: 625 (1957). (1780)

Continuous filament yarn of the nylon and Terylene groups is passed under tension and at a temperature between 100° C and 15° under the melting point over and in contact with one or more edges whereby it is bent through at least 170°. On relaxing the tension, the filaments acquire a high degree of crimp.

CUTTING OF ARTIFICIAL FILAMENTS. N. B. Rajchenbaum, R. G. Wakely, and R. E. Jones (to Imp. Chem. Inds. Ltd). BP 762 391, Nov. 28, 1956. Through BCIRA 37: 620 (1957). (1781)

In cutting Terylene tow into staple fiber, the difficulties are greatly reduced by imparting an electrostatic charge to the tow (by friction against a tension gate or tensioning pins), spreading it into a ribbon, applying a lubricant, and raising the temperature to 100-200° C.

MANUFACTURE OF CRIMPED YARNS. J. C. Fouletier (France). BP 762 475, Nov. 28, 1956. Through BCIRA 37: 625 (1957). (1782)

Several singles yarns (not having been cold-drawn) are twisted together or wrapped around one or more singles as a core, wound into a bobbin, heated to set the twist, separated again by an untwisting device, and wound into individual packages on spindles driven by variable-speed devices.

YARN SPINDLE. N. J. Stoddard and W. A. Seem (to Universal Winding Co.). USP 2 829 487, Apr. 8, 1958. (1783)

High speed twisting and untwisting spindle for the continuous heat treatment of thermoplastic yarns.

BREAKER DRAFTING FRAME. R. Wildbolz (to Joh. Jacob Rieter & Co. Ltd). USP 2 830 327, Apr. 15, 1958. (1784)

Staple fiber yarns are produced directly from tows of filaments on a breaker drafting frame with means for changing the angle of the tow at the breaking device without changing the distance of the latter from the front drafting rolls.

CRIMPING YARNS. S. R. Beech (to Fine Spinners & Doublers Ltd). BP 784 004, Oct. 2, 1957. Through BCIRA 37: 753 (1957). (1785)

Two or more thermoplastic yarns are continuously guided by individual guides to a heating zone in which they are twisted together and then drawn away through other individual guides, whereby the ends are untwisted but retain the crimped form imposed on them while in the heating zone. The initial yarns are led through devices that compensate for any differences in contraction in the heating zone.

PROCESSING AID FOR RAYON FIBERS. W. Sonnenschein (to Spinnfaser AG). USP 2 828 229, Mar. 25, 1958. (1786)

The processing of rayon staple fibers is improved by coating them with fatty acid esters of higher aliphatic saturated alcohols, e.g. oxyethylated stearic acid oxyethylamide.

OPENING, PICKING, FIBER PREPARATION B 1

PNEUMATIC DELIVERY BOXES FOR STAPLE FIBER. R. G. R. Baker (to Courtaulds Ltd). BP 762 393, Nov. 28, 1956. Through BCIRA 37: 623 (1957). (1787)

BLENDING OF FIBROUS MATERIALS. F. Singleton (to T.M.M. (Research) Ltd). BP 762 619, Nov. 28, 1956. (Addition to BP 706 043). Through BCIRA 37: 624 (1957). (1788)

The ingredients are fed to gravity feed trunks where the pile is kept at a constant head, and fluted metering rollers are used in pairs to withdraw fiber in desired proportions from each pile and deposit it on a conveyor, the speed of the rollers governing the proportions. At least one of each pair of metering rollers has a wire covering (e.g. card clothing) so as to effect some opening of the mass of fiber.

MULTI-STAGE COTTON LINT CLEANER. H. G. Moss. USP 2 825 096, Mar. 4, 1958. (1789)

Double cleaner in which cotton (in the form of a thin batt) is successively cleaned on two toothed cylinders and passed between drawing rolls to effect parallelism. The transfer from one cylinder to another is effected by an intermediate transfer drum and by air jets.

BATT REVERSING COTTON LINT CLEANER. H. G. Moss. USP 2 827 667, Mar. 25, 1958. (1790)

CONTINUOUS FIBER MIXING APPARATUS. H. Schweizer (to Joh. Jacob Rieter & Cie AG). USP 2 828 510, Apr. 1, 1958. (1791)

COTTON LINT CLEANER. D. D. Day (to Murray Co. of Texas). USP 2 830 328, Apr. 15, 1958. (1792)

CARDING AND COMBING B 2

CARDING ENGINES. D. Howorth (to D. Howorth & Son Ltd). BP 761 472, Nov. 14, 1956. Through BCIRA 37: 624 (1957). (1793)

Suction clearer comprises 2 pipes that cross the machine, one close to the takerin roller and the other close to the doffer cylinder, both divided lengthwise into passageways that open at intervals. Each pipe is connected to suction trunking and the dust and fly are caught in a bag in a collecting chamber.

DUST REMOVAL AT CARDING ENGINES. F. Brownsett (to Brit. Cotton Ind. Research Assoc.). BP 762 403, Nov. 28, 1956. Through BCIRA 37: 624 (1957). (1794)

High air pressure is avoided by continuous exhaustion at the regions of the junctions between the main cylinder and (1) the flats at the takerin end and (2) the doffer cylinder. These regions are enclosed and connected by trunking with the exhaust system. In addition, air filters are fitted across the region of the junction of the flats and flats brush at the doffer end and over the entrance to the coiler.

TAPE CONDENSER. Spinnbau GmbH. BP 762 806, Dec. 5, 1956. Through BCIRA 37: 624 (1957). (1795)

The condenser is constructed as a unit separate from the carding engine and is fed with the card web by means of a traveling lattice.

AUTOMATIC CLEANING DEVICE FOR RECTILINEAR COMBING MACHINES. G. Brusorio and A. Rappa (to Officina Meccanica St. Andrea-Novara SpA). USP 2 831 216, Apr. 22, 1958. (1796)

DRAWING AND ROVING B 3

SLIVER DRAWING MACHINE. L. F. Guimbretiere, A. G. Pollet, and E. J. Sorez (France). USP 2 825 937, Mar. 11, 1958. (1797)

Successive fractions of fibers along the breadth of a sheet of fibers are clamped and removed from the sheet until all the fibers along the breadth have been removed. This step is repeated as the sheet is advanced forward by a length corresponding to the depth of clamping, and the fibers which have been removed are placed in overlapping relationship to form a sliver. The method allows a single drawing step at a high drawing rate.

KNURLED DRAFT ROLL CLEANING AND BURNISHING APPARATUS. R. Kelly and W. Reid. USP 2 826 773, Mar. 18, 1958. (1798)

REINFORCED ROVING. R. W. Hanson. USP 2 829 421, Apr. 8. 1958. (1799)

The necessity of twisting roving prior to spinning is eliminated by enveloping the roving in a tape which is removed at the spinning frame.

ECCENTRICALLY MOVABLE TOP DRAFTING ROLL CLEARER. J. T. White. USP 2 830 329, Apr. 15, 1958. (1800)

Self-contained clearing board which rests on the top rolls and is eccentrically linked to a roll driven by the top rolls.

SPINNING, WINDING, TWISTING B 4

RING LUBRICATION ON RING DOUBLING OR TWISTING MACHINES. F. Ridgway (to Arundel, Coulthard & Co. Ltd). BP 761 155, Nov. 14, 1956. Through BCIRA 37: 625. (1957). (1801)

A wick extends from an oil trough in the ring rail to a groove in the face of the ring and a tube is secured to the ring rail with its upper end in the oil trough and its lower end fashioned into a pump piston and cylinder held fast on a fixed part of the machine. This cylinder receives surplus oil from the rings and, in one direction of the ring rail, pumps it back to the trough so that the wicks are well supplied, and in the other direction holds it for repumping.

SPINDLE LUBRICATION. Brevets Aero Mecaniques SA. BP 761 193, Nov. 14, 1956. Through BCIRA 37: 625 (1957). (1802)

Means for raising lubricating oil from a bath to a spindle driven by worm gear.

TRAVELING CLEANING APPARATUS FOR SPINNING MACHINES. G. W. Allred. BP 762 650, Nov. 28, 1956. Through BCIRA 37: 625 (1957). (1803)

The blower unit travels on an overhead track, has a motor that rotates an impeller for producing an air stream, and can direct the air blast, step by step, at various angles between the ceiling above and the machine below.

IMPROVED WOOLEN-TYPE SPINNING FRAME. G. E. M. Sagehomme (Belgium). USP 2 820 336, Jan. 21, 1958. (1804)

WINDING APPARATUS. C. W. Hunt and H. Sittig (to Celanese Corp.). USP 2 822 660, Feb. 11, 1958. W. Farrady and R. W. Coleman. USP 2 822 661, Feb. 11, 1958. W. Farrady. USP 2 822 662, Feb. 11, 1958. (1805)

Modified ring spinning device for winding yarn on a bobbin so that the bobbin does not carry a long loose tail, thus eliminating contamination of the yarn.

REPAIR AND REPLACEMENT CAP FOR TWISTING MACHINE HEADS. W. C. Gustafson. USP 2 826 892, Mar. 18, 1958. (1806)

Repair cap which enables the mill operator to repair his own twister heads.

YARN CLAMP MECHANISM FOR BOBBIN WINDING MACHINE. H. H. Cadle (to Foster Mach. Co.). USP 2 827 243, Mar. 18, 1958. (1807)

Yarn end is clamped by a rotary clamp only after the beginning of the bobbin winding operation and is then released so that it is wound into the package, thus eliminating a yarn tail projecting from the bobbin.

BOBBIN WINDING MACHINE. W. L. Perry (to Abbott Mach. Co.). USP 2 827 244, Mar. 18, 1958. (1808)

Chuck for receiving the base end of a bobbin of any style or shape is combined with a mechanism for causing the yarn tail to be removed from the base chuck and wound into the yarn package.

TENSION DEVICE FOR TWO-FOR-ONE TWISTERS. W. D. Kellogg and J. A. Truitt (to Am. Viscose Corp.). USP 2 827 756, Mar. 25, 1958. (1809)

Freely moving sphere located between a magnetically controlled tension device and a twisting flyer to prevent the twist from backing up to the tension device.

TWISTER HEAD FOR WOOL SPINNING FRAME. R. B. Newton (to Whitin Mach. Works). USP 2 827 757, Mar. 25, 1958. (1810)

Bearing construction and means for securing the twister head to a supporting frame.

TWO-FOR-ONE TWISTING MACHINE. N. E. Klein (to Deering Milliken Research Corp.). USP 2 830 431, Apr. 15, 1958. (1811)

For producing twisted, multiple yarn or cord for use in tires, belting, or floor coverings.

SPINNING RING LUBRICATION. J. Raboisson (to Manufacture Alsacienne De Broches). USP 2 830 433, Apr. 15, 1958. (1812)

Lubrication wick arrangement for rings having inner and upper traveler-engaging bearing faces.

RING TRAVELER. R. J. Burns and J. E. MacAfee (to E. I. du Pont de Nemours & Co.). USP 2 831 313, Apr. 22, 1958. (1813)

Modified C-shaped traveler which can be mounted on a nylon ring having an exterior flange with only slight force, thus preventing any deformation of the ring.

SPINNING RING LUBRICATION. J. R. Mulholland. USP 2 831 314, Apr. 22, 1958. (1814)

The lubricant moves by capillary action from an exterior reservoir to the wick supplying the lubricant chamber in back of the spinning ring bearing liner, thus preventing the accumulation of excess lubricant on the interior of the ring or on the traveler.

YARNS B 5

COMPOSITE YARNS. J. W. Hicks, Jr. (to Deering Milliken Research Corp.). USP 2 825 199, Mar. 4, 1958. (1815)

Composite novelty yarns are prepared by subjecting a strand of filaments to an electric charge so as to separate the filaments, contacting the separated filaments with staple fibers, and twisting to entwine the staple fiber and filaments.

GLASS CORD REINFORCED SILICONE RUBBER CORD TIRE. D. C. Youngs (to Dow Corning Corp.). USP 2 827 099, Mar. 18, 1958. (1816)

Tire composed of silicone rubber reinforced with glass cords coated with a film of a cured organopolysiloxane.

METHOD AND APPARATUS FOR BULKING YARN. E. J. Griset, Jr., (to Am. Enka Corp.). USP 2 829 420, Apr. 8, 1958. (1817)

Curled or bulked yarn is produced by passing continuous filament yarn through a suction device. The direction of yarn travel is changed as the yarn emerges (more slowly than it entered) while it is still being acted upon by the stream of air passing through the device. Numerous small curls are introduced throughout the length of the yarn.

FABRIC PRODUCTION C

TENSION CONTROL METER. E. T. Hitchin and G. V. Greatorex (to Brit. Celanese Ltd). BP 782 015, Aug. 28, 1957. Through BCIRA 37: 610 (1957). (1818)

Yarn tensiometer with electromagnetic recording is described.

WARPING, SLASHING, YARN PREPARATION C 1

TENSIONING DEVICE. K. W. Webb. BP 761 042, Nov. 7, 1956. Through BCIRA 37: 628 (1957). (1819)

L-shaped metal holder with two sets of three columns anchored at one end to the two limbs of the L alternately and extending to the free ends in spaced, concentric curves the ends in one set being staggered relative to the others. The device is intended for use on winding machines or inside shuttles.

BOBBIN WINDING MACHINE. Algemene Kunstzijde Unie NV. BP 761 595, Nov. 14, 1956. Through BCIRA 37: 628 (1957). (1820)

Suction device for taking up running yarn while a full bobbin is being doffed and replaced. The odd piece of yarn is delivered to a waste receptacle.

THREAD CUTTER FOR THREAD REELS. S. D. Hunter. BP 761 608, Nov. 14, 1956. Through BCIRA 37: 628 (1957). (1821)

Tool with a cutting blade in a V-shaped notch, for insertion in the hole of a cotton reel or the like.

WINDING MACHINES. H. A. V. Bulleid and F. A. Smith (to Brit. Nylon Spinners Ltd). BP 761 689, Nov. 21, 1956. Through BCIRA 37: 628 (1957). (1822)

Two package supports are pivotally mounted at one end of an arm, the other end of which is mounted on a shaft for rotation in such a way that a thread support may be carried part way round a frictional driving roll and maintained in contact therewith, or moved out of contact for doffing the package.

CREELS. R. A. Kimber and P. E. R. Coleman (to Crowther Ltd). BP 762 089, Nov. 21, 1956. Through BCIRA 37: 628 (1957). (1823)

Creel for a warping or beaming machine on which the packages are mounted in an arc for over-end unwinding and each is fitted with an electrical stop-motion detector whereby the whole creel is stopped if any one yarn end fails.

CHENILLE KNOT TYING MACHINE. P. J. Branchu, A. E. Edmond, P. Pinardel, and J. P. de Willenich (France). BP 762 297, Nov. 28, 1956. Through BCIRA 37: 628 (1957). (1824)

In tying knots in chenille for the manufacture of imitation astrakhan, the chenille strand is disposed in an undulating line, rotated so that the undulations become loops, and a free end of the strand is passed in a single stroke through all the loops so that each loop is drawn in succession through all that follow it.

YARN WAXING MACHINE. J. D. W. Taylor (to Wm. Ayrton & Co. Ltd). BP 762 617, Nov. 28, 1956. Through BCIRA 37: 629 (1957). (1825)

Waxing machine, especially for use on a waxing bracket fitted to a winding machine, comprises a pair of spindles each carrying a wax cake, a pulley by the side of one spindle driven by the yarn, a yarn guide and tension device by the opposite side of the other spindle, and worm gearing for coupling the pulley to both spindles. This gearing and the spindle bearings may lie in an oil bath.

STRIPPING YARNS FROM YARN PACKAGES. L. Damman. BP 784 193, Oct. 2, 1957. Through BCIRA 37: 756 (1957). (1826)

Apparatus for removing residues of yarn from spools, cones, tubes, and bobbins comprises a circular or polygonal drum with a series of hooks round the inside and mounted for rotation at a slight inclination. The spools are fed through holes in the upper end of the drum and leave by way of a scoop at the lower end, leading into a duct. The hooks are cleared of the trapped ends of yarns by hand.

SINGLE BEAM RACK. J. Berra and J. B. McGinn (to Am. Viscose Corp.). USP 2 828 023, Mar. 25, 1958. (1827)

Beam rack with stacking guides for positioning the racks on top of each other for storing or shipping.

APPARATUS FOR CONDITIONING AND MARKING QUILLS ON THE RECEIVING TABLE OF AN ABBOTT QUILLER. K. Heyman, R. L. Carroll, and P. A. Reuter (to Mona Inds.). USP 2 828 715, Apr. 1, 1958. (1828)

WARP DRAWING-IN MACHINE. H. Meierhofer (to Zellweger AG). USP 2 828 527, Apr. 1, 1958. (1829)

Device for presenting heddles in a predetermined sequence to the drawing-in hook of a conventional drawing-in machine.

YARN CONE. C. K. Dunlap (to Sonoco Prods. Co.). USP 2 829 571, Apr. 8, 1958. (1830)

Free, even-tensioned withdrawal of yarn from a cone is obtained by forming the cone from a resin coated paper which is then heat treated to form a moisture resistant, smooth, and unyielding surface.

YARN GUIDE FOR MAKING COPS WITH FRUSTO-CONICAL ENDS. G. Guibert (to Soc. Condamin et Prodon). USP 2 830 774, Apr. 15, 1958. (1831)

WEAVING C 2

DOUBLE VELVET LOOM. T. A. Gusken (Germany). BP 761 019, Nov. 7, 1956. Through BCIRA 37: 629 (1957). (1832)

Two shuttles travel simultaneously through the warp sheds of the upper and lower fabrics in opposite directions and in such a manner that always only one shuttle is available at each side of the lay during the bobbin-changing operation.

PICKERS FOR OVERPICK LOOMS. R. Hrdina. BP 761 073, Nov. 7, 1956. Through BCIRA 37: 630 (1957). (1833)

Picker is formed with a single bearing for the spindle, comprising a bore through a solid, cylindrical part. Below this part the picker is offset from the upper, solid part so that it will miss the pirns as it passes the pirn magazine, and has a slot to receive the driving belt.

SHUTTLE LOADING DEVICE. Soc. Coll. Gardella & Figlio. BP 761 653, Nov. 21, 1956. Through BCIRA 37: 630 (1957). (1834)

Mechanism for inserting solid cops into the shuttles of high speed automatic looms without jamming, without putting the weft fork out of action, and without the shuttle making a pick with a short piece of weft or none at all.

WEFT BEATUP. A. G. Billing and J. Duckworth (to Brit. Celanese Ltd). BP 761 887, Nov. 21, 1956. (Addition to BP 660 022). Through BCIRA 37: 630 (1957). (1835)

Reed mounted on a pivotally oscillating lay is used to beat up the weft and positioning of the reed at beatup is effected by a movement of the reed (in the direction of its wires) derived from the forward motion of the lay.

WEFT-CHANGING MECHANISM FOR GRIPPER LOOMS. Sulzer Frères SA. BP 762 050, Nov. 21, 1956. Through BCIRA 37: 629 (1957). (1836)

SHUTTLES. J. Dawson (to Thomas Dawson (Shuttle-makers) Ltd). BP 761 929, Nov. 21, 1956. Through BCIRA 37: 630 (1957). (1837)

In a shuttle eye of porcelain or other hard material having a vertical slot leading into a transverse hole, the end of the eye at one side of the slot is inclined or curved to guide weft to the slot and at the other side it projects a short distance downwards beyond the inclined or curved portion. A pivoted wire eyelet controlled by an elastic strip is mounted behind the eye as a tension device.

TEMPLES. T. Ryffel (Switzerland). BP 762 006, Nov. 21, 1956. Through BCIRA 37: 630 (1957). (1838)

Temple that grips the edge of the fabric at an angle, does not require lubrication, and can be released easily is carried by a support that can be fixed at a suitable position along a bar of the loom framework, and can be clamped to the support at various positions so as to make contact with the fabric at various angles.

CAM AND LEVER OPERATED SHUTTLE CHANGING MECHANISM. E. A. Butin (France). BP 762 211, Nov. 28, 1956. Through BCIRA 37: 629 (1957). (1839)

SHUTTLELESS NARROW FABRIC LOOM. J. H. Eaton (to Luke Turner & Co. Ltd). BP 762 324, Nov. 28, 1956. Through BCIRA 37: 629 (1957). (1840)

Selvage motion in which the yarn package is moved bodily in one direction of rotation through a circular path about an axis transverse to the warp shed and in the vicinity of the fell at a rate correlated with the rate of reciprocation of the arm that inserts the weft. The selvage thread thereby engages the picks of weft and binds them into a selvage.

PICKER STRAP. W. R. Brooksbank. BP 762 280 and 762 334, Nov. 28, 1956. Through BCIRA 37: 630 (1957). (1841)

The strap is secured to the top of the picker by clamping screws that pass through a plate above the strap into another plate held in a recess in the picker. On an overpick loom the strap is consequently without twist in the vicinity of the picker. The strap is an endless band that loops round a peg in a member clamped as described to the head of the picker. The portion of the strap that takes the strain can be changed from time to time.

DEVICES FOR ARRANGING HEDDLES. Zellweger AG, Uster. BP 781 937, Aug. 28, 1957. Through BCIRA 37: 587 (1957). (1842)

The device is for aligning wire heddles to facilitate drawing-in.

WEFT INSERTING DEVICE. P. Pakleppa (South Africa). BP 782 382, Sept. 4, 1957. Through BCIRA 37: 587 (1957). (1843)

Four weft yarns are continuously laid into two sets of at least two adjacent sheds by means of parallel arms with eyes at their ends. The method is particularly applicable for the production of bags.

HEDDLE FRAME LIFTING DEVICE FOR HAND JACK LOOMS. H. J. Micander. USP 2 823 705, Feb. 18, 1958. (1844)

CLOTH TAKEUP MECHANISM FOR CIRCULAR LOOM AND METHOD FOR WEAVING CLOTH. J. Rabeux and B. Masson (to Soc. d'Applications Gen. d'Elect. & de Mecanique). USP 2 823 707, Feb. 18, 1958. (1845)

Takeup mechanism by means of which zones of different weft density may be automatically obtained at equal or unequal distances by changing the speed of the mechanism.

HARNESS FRAME. J J. Kaufmann (to Steel Heddle Mfg. Co.). USP 2 827 079, Mar. 18, 1958. (1846)

Means for mounting the heddle rods in a harness frame so that all the parts are positioned inside the end struts of the frame.

SHUTTLE TIP STRUCTURE. H. P. Rutherford (to Multi Corp.). USP 2 828 773, 2 828 774, and 2 828 775, Apr. 1, 1958. (1847)

Methods of attaching a metal tip to a wooden shuttle to provide good bond with wide distribution of picker stick impact force and attendant internal friction.

RIBBON LOOM SHUTTLE. G. Wiget (to Adolph Saurer Ltd). USP 2 829 676, Apr. 8, 1958. (1848)

WEFT MECHANISM: JERK-IN PREVENTER. B. C. Baggott. USP 2 829 677, Apr. 8, 1958. (1849)

Attachment for shuttle feeler to engage and retain loose weft threads out of the path of the shuttle, in order to keep them from being drawn into the fabric being woven.

FILLING FEELER FOR QUILL CHANGE MOTION. C. R. Beall (to West Point Mfg. Co.). USP 2 829 678, Apr. 8, 1958. (1850)

Side slipping feeler for box looms which will actuate the replenishing mechanism only when the yarn in the shuttle is depleted even though side slipping occurs.

ELECTROMECHANICAL WEFT STOP MOTION. K. E. Sanderson and H. N. Thibault (to Draper Corp.). USP 2 829 679, Apr. 8, 1958. (1851)

INSIDE SELVAGE MOTION FOR CIRCULAR LOOM. B. Masson, M. Thibaut, and A. Berquier (to Soc. d'Applications Gen. d'Electricite & de Mecanique). USP 2 830 623, Apr. 15, 1958. (1852)

KNITTING C 3

CIRCULAR HOSIERY MACHINE. W. E. Shelby (to Scott & Williams, Inc.). USP 2 829 510, Apr. 8, 1958. (1853)

Control mechanism for changing stocking size and simultaneously marking the stocking to indicate its size and length.

KNITTING MACHINE YARN TENSIONING DEVICE. B. Lermont. BP 761 492, Nov. 14, 1956. Through BCIRA 37: 631 (1957). (1854)

Ribbon spring with its ends wound in opposite directions to form reversely-wound coils, the outer convolutions of which urge themselves together so that the portion of the ribbon spring connecting the coils is straight. The yarn is guided into place between the convolutions.

FABRIC BEAM FOR WARP KNITTING MACHINE. P. Schönfeld and J. M. Hübsch. BP 761 827, Nov. 21, 1956. Through BCIRA 37: 631 (1957). (1855)

Beam comprises two trough-like members, hinged together, that can be adjusted to various diameters. Inside is a bar, hinged to a lever, that can be forced up to the slot between the bowls so as to clamp the end of the fabric when this is inserted into the slot.

MARKING ATTACHMENT FOR CIRCULAR HOSIERY MACHINES. P. A. Mahler (to Fidelity Mach. Co.). USP 2 827 780, Mar. 25, 1958. (1856)

Device for marking the hosiery by means of tuck stitches to indicate size or as a position guide.

AUTOMATIC WELT-ROD RELEASE MECHANISM FOR STRAIGHT BAR KNITTING MACHINE. F. Lambach (to Robert Reiner, Inc.). USP 2 827 781, Mar. 25, 1958. (1857)

CIRCULAR HOSIERY MACHINE. H. S. Burdett (England). USP 2 828 617, Apr. 1, 1958. (1858)

Auxiliary feed control arrangement for a three feed seamless hosiery machine of small diameter.

LOOPING MACHINE STOP MOTION. D. R. Ivester (to Hanes Hosiery Mills Co.). USP 2 828 707, Apr. 1, 1958. (1859)

CIRCULAR HOSIERY MACHINE. G. I. Folsom (to Scott & Williams, Inc.). USP 2 829 508, Apr. 8, 1958. (1860)

Special sinker movements for the tensioning of rib fabric as it is produced makes possible the knitting of rib tops from bare needles without preliminary or makeup knitting.

HAND KNITTING MACHINE. J. Q. Friedman. USP 2 829 509, Apr. 8, 1958. (1861)

Attachment for moving the knitting cam by means of an electric current.

HAND KNITTING MACHINE. A. Opawa (Austria). USP 2 830 446, Apr. 15, 1958. (1862)

Adjustable camming slide which maintains constant yarn tension while changing the slide width and lead angle for different loop lengths.

FABRICS C 4

NONWOVEN FABRIC. P. D. S. Young, D. A. Leader, and J. A. Rhys. BP 761 364, Nov. 14, 1956. Through BCIRA 37: 632 (1957). (1863)

Fabrics impregnated with thermosetting polyester resins and a polymerization catalyst are wetted with a stabilized, polymerizable monomer (e.g. styrene or an acrylic or vinyl ester) and a polymerization promoter (e.g. a tertiary amine, a mercaptan, or a naphthenate). Several layers of such wetted fabric are placed together and left until, by polymerization of the monomer, a bond is formed.

MACHINE BELTING. S. A. Brazier, F. W. Warren, and W. Lord (to Dunlop Rubber Co. Ltd). BP 761 758, Nov. 21, 1956. Through BCIRA 37: 632 (1957). (1864)

Duck fabric of broken twill or herringbone twill weave is embedded in a vinyl chloride polymer or copolymer with vinyl acetate and/or vinylidene chloride and a plasticizer.

BANDAGES. J. P. Robson and H. C. Holyoake (to Dalmas Ltd). BP 761 783, Nov. 21, 1956. Through BCIRA 37: 632 (1957). (1865)

Surgical dressing that is permeable to water vapor but not to liquids (and therefore helps to keep a wound dry) is obtained by coating a cotton fabric of the type of Bretonne net (apertures 1.5 mm across) on one side with a film of polyvinyl acetal and on the other with a rubber/resin/zinc oxide pressure-sensitive adhesive.

NONWOVEN RESIN-BONDED GLASS FABRICS. F. F. Crocombe (to Boulton Paul Aircraft Ltd). BP 762 096, Nov. 21, 1956. Through BCIRA 37: 632 (1957). (1866)

In the production of sheet material by bonding together glass fiber rovings or yarns with polyester resins, the impregnated yarn or roving is wrapped on a former, with adjacent layers lying at different angles. Curing under pressure is effected on the former and the mass is then cut open and removed as a sheet.

GLASS FIBER REINFORCED LAMINATES. H. Yarrow (to Leda Chemicals Ltd). BP 762 872, Dec. 5, 1956. Through BCIRA 37: 632 (1957). (1867)

Quaternary ammonium salts of the type of lauryldimethylallylammonium chloride are employed to effect a bond between the glass and the resin.

NONWOVEN CORD FABRICS. J. C. Hickman (to John Bull Rubber Co. Ltd). BP 762 983, Dec. 5, 1956. Through BCIRA 37: 631 (1957). (1868)

Single cords from a creel are passed through an extrusion head where they receive a coating of a compounded or pure polymer "dough" and are then fed side by side to the nip of a pair of grooved pressure rollers, the ridges on one roller fitting in the grooves of the other. The coatings flow laterally and coalesce. The continuous web is then pressed to make it smooth.

APPARATUS FOR MAKING NONWOVEN CLOTH. F. W. Hartstein. USP 2 828 795, Apr. 1, 1958. (1869)

TUFTED PILE FABRICS. W. C. F. Swindell (to Brintons Ltd). BP 780 762, Aug. 7, 1957. Through BCIRA 37: 588 (1957). (1870)

Cellulose acetate yarn is incorporated in the body of the fabric and is subsequently fused.

DEPOSITION OF DRY FIBERS TO PRODUCE FIBROUS WEBS. J. D'A. Clark. BP 780 823, Aug. 7, 1957. Through BCIRA 37: 581 (1957). (1871)

Curvilinear fiber-depositing heads, operating on a shower-head principle, are described; they may be used for converting waste fibers into webs for paddings, etc.

PACKING OR LAGGING MATERIAL FOR BOLTED JOINTS. J. D. Blakeley and D. Whalen (to Brit. Belting & Asbestos Ltd). BP 780 978, Aug. 14, 1957. Through BCIRA 37: 588 (1957). (1872)

The woven tape described has regions in which warp is missing, and the threads may be of asbestos.

AUTOMOBILE UPHOLSTERY. R. L. Dunn (to Dunlop Rubber Co. Ltd). BP 781 188, Aug. 14, 1957. Through BCIRA 37: 600 (1957). (1873)

Grooved or fluted material for automobile seating consists of foam rubber attached to a flexible sheet of fabric.

CORDUROY CLOTH. R. Redman and E. Moss (to Hebden Bridge Estate Co. Ltd). BP 781 932, Aug. 28, 1957. Through BCIRA 37: 588 (1957). (1874)

One of each pair of pile picks between two ground picks is so arranged that between the floating portions it is bound by three warp ends instead of the usual one.

SURGICAL DRESSINGS. A. R. Stephenson (to T. J. Smith & Nephew Ltd). BP 781 975, Aug. 28, 1957. Through BCIRA 37: 600 (1957). (1875)

Dressings with a porous backing have spaced wavy lines of a pressure-sensitive adhesive.

PLATED KNITTED FABRICS. A. Slade (to Brit. Nylon Spinners Ltd). BP 782 438, Sept. 4, 1957. Through BCIRA 37: 588 (1957). (1876)

The yarn on the outside is a spun yarn and that on the inside is a stretch, continuous filament, yarn.

FABRICS SUITABLE FOR ELECTRIC PADS AND BLANKETS. A. Negromanti. BP 783 883, Oct. 2, 1957. Through BCIRA 37: 757 (1957). (1877)

A simple fabric is woven directly on a loom as a double fabric with warp-way or weft-way threads passing at intervals from one web to the other, thus creating a series of tubes into which the bare wires are inserted. If retractile yarns are used in one web and the double fabric is heated to about 75-100° C, these yarns will shrink and draw the fabric into ridges, the nonretractile (preheated) yarns in the other web becoming curved. This increases the heat insulation. Several layers of the simple fabric are piled together and united by welding.

AXMINSTER LOOM PILE SHEARING MECHANISM. J. Haynes (to T. M. M. (Research) Ltd). USP 2 824 580, Feb. 25, 1958. (1878)

End tuft support located adjacent to selvage shuttle side of loom and moving in timed relationship with the operation of the tuft cutting knives so as to eliminate the usual additional trimming operation.

PROCESS OF MAKING AN INSULATING MAT. J. F. Stephens (to Gustin-Bacon Mfg. Co.). USP 2 825 389, Mar. 4, 1958. (1879)

Acoustical or heat insulating material made by impregnating a felted fibrous mat with an elastomeric substance and a thermosetting or thermoplastic resin.

ANTIVESICANT FILTER FABRIC. D. Burks, Jr. (to U. S. Secretary of War). USP 2 825 663, Mar. 4, 1958. (1880)

Fabrics highly resistant to penetration by vesicants, such as mustard gas, are prepared by treating a base fabric with activated carbon particles dispersed in a cellulose binder. The carbon serves to resist the penetration of vesicants and the cellulose to attach the carbon particles to the fabric without affecting its flexibility or air permeability.

WATER VAPOR PERMEABLE COATED FABRICS. R. J. Mayfield (to E. I. du Pont de Nemours & Co.). USP 2 825 711, Mar. 4, 1958. (1881)

Woven and nonwoven fabrics impermeable to water but permeable to water vapor are obtained by fusing a plastisol composition containing a water-insoluble nonelectrolyte and a cross-linked anionic polyelectrolyte polymer with the fabric.

OUTDOOR EMERGENCY BLANKET. R. B. Sawtell and J. T. Gresham (to Kimberly-Clark Corp.). USP 2 825 912, Mar. 11, 1958. (1882)

Compressible and expandable, water resistant blanket composed of a pad of several plies of creped cellulose wadding or tissue type sheets secured to backing of a water resistant creped, crinkled, or fluted paper.

WOVEN FELT. R. M. Chandler (to E. I. du Pont de Nemours & Co.). USP 2 825 958, Mar. 11, 1958. (1883)

Fabrics having a felt-like surface are produced by raising a thick nap of fibers on the surface of a fabric woven of retractable synthetic fibers and heating to the point of retraction of the fibers but below the bonding point of the fibers to produce a layer of mechanically entangled fibers on the fabric surface.

DECORATIVE RIBBON. E. Hagenbuch (to Bandfabrik Breitenbach AG). USP 2 826 225, Mar. 11, 1958. (1884)

Decorative ribbon which can be formed into a multiple loop or bow by means of an auxiliary thread extending through the ribbon length and having alternating longitudinal and transverse sections connected to the fabric at points where the thread changes direction.

MANUFACTURE OF FIBER REINFORCED FOAM RUBBER. W. T. Wagner (to Dayton Rubber Co.). USP 2 827 666, Mar. 25, 1958. (1885)

APPARATUS FOR MANUFACTURING NONWOVEN FABRICS. J. d'A. Clark (to Fibrofelt Corp.). USP 2 827 668, Mar. 25, 1958. (1886)

In an apparatus for the air deposition of dry fibers for nonwoven fabrics, a nozzle arrangement for directing air jets at high velocity prevents the aggregation of fiber clumps.

APPARATUS FOR MAKING TUFTED CARPETS. W. Felton (to David Crabtree & Son Ltd). USP 2 827 865, Mar. 25, 1958. (1887)

Machine for making tufted carpets by introducing a loop of thread through a backing material, inserting a length of tufting material through the loop, and tightening the loop to draw the tufting material into contact with the backing.

LOOPER MECHANISM FOR MULTIPLE NEEDLE TUFTING MACHINES. M. B. Penman (to Magee Carpet Co.). USP 2 827 866, Mar. 25, 1958. (1888)

Mechanism for producing a carpet having alternate high and low loops in both weft and warp rows.

ALKENYL SUBSTITUTED PHENOL RESIN BINDERS FOR GLASS FIBER SHEET LAMINATES. R. M. Christenson and R. A. Freeman (to Pittsburgh Plate Glass Co.). USP 2 827 946, Mar. 25, 1958. (1889)

REMOVABLE TABS OR LABELS FOR MARKING TEXTILE ARTICLES TO BE LAUNDERED OR DRY-CLEANED. H. Meyer (England). USP 2 828 776, Apr. 1, 1958. (1890)

PICKER ARM DRIVE FOR PILE FABRIC STITCHING MACHINE. J. J. Fedevich. USP 2 829 611, Apr. 8, 1958. (1891)

Mechanism for supporting and oscillating the picker arms which catch and hold the loops as they are stitched through the fabric backing.

WOVEN NARROW FABRIC WITH RESILIENT SELVAGE. E. Roberts, Jr., (to Roberts, Cushman & Co.). USP 2 829 680, Apr. 8, 1958. (1892)

Use of supertwisted yarn as the binder for locking the tubular selvage to the warp of a narrow fabric.

GLASS FIBER COMPOSITION FOR RADIATION RESISTANT CLOTHING. D. Labino (to L. O. F. Glass Fibers Co.). USP 2 830 000, Apr. 8, 1958. (1893)

HORTICULTURAL FABRICS. F. W. Manning. USP 2 830 404, Apr. 15, 1958. (1894)

Nonwoven fabric for protection of trees, plants, or freshly seeded ground formed of discontinuous, stretchable filaments intersecting and overlapping each other.

NONWOVEN GLASS FIBER INSULATION MAT. E. J. Haddox (to L. O. F. Glass Fibers Co.). USP 2 830 648, Apr. 15, 1958. (1895)

Apparatus for the continuous production of low density mats of uniform thickness and density.

GLASS FIBER LAMINATE. J. D. Fennebresque and I. E. Muskat (to Celanese Corp.). USP 2 830 925, Apr. 15, 1958. (1896)

Uniformly pigmented laminate produced by incorporating a mat of colored fibers into the laminate.

METHOD AND APPARATUS FOR PRODUCTION OF GLASS FIBER REINFORCED LAMINATES. W. R. Bailey (to Gar Wood Inds.). USP 2 830 926, Apr. 15, 1958. (1897)

ELASTIC WOVEN FABRIC. S. J. Taylor (to Russell Mfg. Co.). USP 2 831 235, Apr. 22, 1958. (1898)

Electrical insulating tape is woven from yarns prepared by winding glass fibers around a cellulosic core to form a helix. After weaving the tape is heated to set the yarns in their helical form and to carbonize the core.

WEAVING PILE CARPETS. J. Crawford (to Mohasco Inds.). USP 2 831 507, Apr. 22, 1958. (1899)

Method of weaving carpets of 2-shot construction having a wide variety of pile surface effects on looms using pile wires and equipped with a jacquard mechanism.

FINISHING AND CHEMICAL PROCESSING D

FLOCKED FABRICS. H. Ewing (to Brit. Celanese Ltd). BP 762 467, Nov. 28, 1956. Through BCIRA 37: 640 (1957). (1900)

In coating a fabric with a pile consisting of upstanding staple fiber, the sheet, covered with an adhesive, is drawn under a sheet of insulating material which is electrified by friction and the staple fiber flock is fed to the space between the sheets. Subsequently, the adhesive coating is hardened so as to anchor the fibers.

FINISHING APPARATUS. Maschinenfabrik Benninger AG. BP 781 174, Aug. 14, 1957. Through BCIRA 37: 599 (1957). (1901)

A machine for ensuring uniform treatment of cloth, warp or skeins in washing, dyeing, etc. is described. The material is slotted through a hollow cylinder that oscillates in the bath fluid.

PRESSURE FINISHING CONTAINERS. E. E. Bellmann and F. Bellmann (Germany). BP 782 400, Sept. 4, 1957. Through BCIRA 37: 599 (1957). (1902)

Beam dyeing, bleaching, or drying machinery is described.

CHEMICAL PROCESSES D 1

EMBOSSED THERMOPLASTIC MATERIALS. C. J. Whitelegg and F. L. Barrett (to Bleachers' Assoc. Ltd). BP 761 075, Nov. 7, 1956. Through BCIRA 37: 640 (1957). (1903)

Materials like polyvinyl chloride film and Terylene fabrics are patterned by applying radiant heat at localized areas to cause shrinking.

APPARATUS FOR LIQUID TREATING FABRIC LENGTHS. R. Coburn (to Flaxall Prods. Ltd). BP 761 469, Nov. 14, 1956. Through BCIRA 37: 636 (1957). (1904)

The length of fabric that can be treated at one time in a given tank or vat is increased by means of a pair of rollers mounted parallel in the vessel in such a way that they may be swung over to change place and fold the fabric into two plies. With the two plies on one roller, the rollers are interchanged, one ply is run off to the empty roller and formed here into two plies and the other ply is drawn off. When the first roller is empty the positions are interchanged again and the action is repeated so long as fabric is fed in.

RESIN FINISHING. J. G. Evans, G. Landells, W. J. Moorhouse, J. R. W. Perfect, C. Duckworth, and M. D. Paterson (to Bradford Dyers' Assoc. Ltd). BP 761 548, Nov. 14, 1956. Through BCIRA 37: 640 (1957). (1905)

Mechanical finishes fast to washing are produced by applying the mechanical treatment to the fabric while impregnated with an aqueous medium containing a fixing agent, e.g. substances leading to a melamine-formaldehyde or urea-formaldehyde resin, or an organic monomeric isocyanate or isothiocyanate, or an addition product of these with an alkali bisulfite.

WATERPROOFING AGENTS. Compagnie Francaise des Matières Colorantes. BP 761 834, Nov. 21, 1956. Through BCIRA 37: 641 (1957). (1906)

An alkali chromate, a fatty acid (e.g. stearic), an alcohol or aldehyde (e.g. ethyl alcohol), and a solvent (e.g. carbon tetrachloride) are boiled together under reflux and gaseous hydrogen chloride is bubbled through.

FLAMEPROOFING AGENTS. J. G. Evans, G. Landells, J. R. W. Perfect, B. Topley, and H. Coates (to Bradford Dyers' Assoc. Ltd and Albright & Wilson Ltd). BP 761 985, Nov. 21, 1956. Through BCIRA 37: 641 (1957). (1907)

Polymers obtained by a condensation and polymerization reaction between a tetrakis hydroxymethyl phosphonium salt (THP chloride, acetate, or phosphate) or tris hydroxymethyl phosphine oxide and at least one nitrogenous compound capable of reaction with formaldehyde, and/or a precondensate of such a nitrogenous compound with an aldehyde.

FLAMEPROOFING AGENTS. Farbenfabriken Bayer AG. BP 762 169, Nov. 21, 1956. Through BCIRA 37: 641 (1957). (1908)

The agents are condensation products of dicyandiamide and boric acid, boric anhydride, a borate or a boric ester, made by heating the dry mixture at 200-500° C.

WATERPROOFING FIBROUS MATERIAL. Farbwerke Hoechst AG. BP 780 967, Aug. 14, 1957. Through BCIRA 37: 601 (1957). (1909)

Treatment with solutions in organic solvents of zirconium alcoholates, carboxylic and/or sulfinic acids, and paraffin wax, etc., is described.

WATERPROOFING COMPOSITION. Ciba Ltd. BP 781 265, 781 266, and 781 267, Aug. 14, 1957. Through BCIRA 37: 601 (1957). (1910)

Derivatives of amino triazine formaldehyde condensates are especially suitable as agents for imparting a water-repellent effect to textiles.

BLEACHING METHOD. J. Dungler (France). BP 781 716, Aug. 21, 1957. Through BCIRA 37: 599 (1957). (1911)

The material is saturated with weak acid (e.g. formic or phosphoric) to neutralize alkali from the scouring process, superficially treated with sodium chlorite or hypochlorite, and heated.

ENHANCING WASHFASTNESS OF FLAME-RESISTANT DRESSINGS. Ciba Ltd. BP 782 418, Sept. 4, 1957. Through BCIRA 37: 601 (1957). (1912)

The resistance to alkaline washing agents of materials impregnated with urea/phosphoric acid derivatives is increased by aftertreatment with a formaldehyde condensation product of the aminotriazine or urea group.

SOLUBLE ALUMINUM GLYCOLATE WATERPROOFING COMPOSITION. Farbwerke Hoechst AG. BP 783 605, Sept. 25, 1957. Through BCIRA 37: 771 (1957). (1913)

AMPHOTERIC SOFTENING AGENTS STABLE TO HIGH TEMPERATURES AND HARD WATER. Badische Anilin und Soda Fabrik AG. BP 784 669, Oct. 16, 1957. Through BCIRA 37: 769 (1957). (1914)

A condensation product containing acid amide and acid ester groups, derived from a higher fatty acid (e.g. stearic) and a trihydroxyalkyldialkylenetriamine, is further condensed with a dicarboxylic acid (e.g. maleic or succinic acid) under conditions that leave some carboxylic groups free. The products are softening agents with particular value in combination with crease-resist finishes.

PNEUMATIC CONTROLS IN LIQUID-TREATING MACHINES. E. R. Sellers (to Sellers & Co. (Huddersfield) Ltd). BP 784 728, Oct. 16, 1957. (Addition to BP 629 310). Through BCIRA 37: 768 (1957). (1915)

The parent invention was concerned with a piston device for pneumatically controlling the pressure of an upper nip roller (e.g. in a washing machine) so as to relieve it altogether or to augment it. It is now proposed to fit a chute with a weighted lid for the fabric coming away from the nip rollers and to make the same pneumatic system control the effect of the lid. Further uses of the system are (1) to control spaced guide rollers in front of the nip rollers and (2) to balance a pivoted draft board through which the fabric is fed to the nip rollers.

PROCESS FOR WASHING OR BLEACHING POLYAMIDE FIBERS. Deutsche Gold & Silber Scheideanstalt. BP 784 911, Oct. 16, 1957. Through BCIRA 37: 762 (1957). (1916)

The agent is a solution of a per-compound (hydrogen peroxide or sodium perborate) protected by an organic -NH- compound.

PREVENTING DISCOLORATION AND CREASEPROOFING NYLON. F. H. Steiger (to Rohm & Haas Co.). USP 2 823 093, Feb. 11, 1958. (1917)

Creaseproof nylon fabrics resistant to discoloration are obtained by treating the nylon with urea, biuret, dicyandiamide, or ammonium cyanate, heating, and treating with an aminoplast to achieve a crease resistant finish.

CELLULOSE FLAMEPROOFING. N. D. Clare and A. J. Deyrup (to E.I. du Pont de Nemours & Co.). USP 2 823 145, Feb. 11, 1958. (1918)

The water-soluble reaction product of an alkali fluoride and boric acid or anhydride is claimed.

VINYL COATED KNIT FABRIC. W. D. Hedges (to Columbus Coated Fabrics Corp.). USP 2 823 156, Feb. 11, 1958. (1919)

Method of combining a calendered vinyl sheet to a knit fabric by coating the vinyl sheet with a vinyl resin dispersion, mounting the fabric on the dispersion, and heating to obtain a permanent vinyl bond between the calendered sheet and knit fabric.

IMPREGNATING A FABRIC WITH POLYETHYLENE. C. R. Worby (to U.S. Rubber Co.). USP 2 824 034, Feb. 18, 1958. (1920)

Impregnating tightly woven fabric with polyethylene by forming a polyethylene film on a roll heated to 250° F and driving the film into the fabric by a friction motion at a nip having just sufficient clearance for the fabric and for the hot polyethylene.

WATERPROOFING CELLULOSIC MATERIAL. E. Robbart. USP 2 824 778, Feb. 25, 1958. (1921)

Cellulosic fabrics or paper are exposed to an aerosol containing an organo silicon halide and an inert gas and are afterwards neutralized by immersion in a mild alkaline solution.

CARBAMOYLETHYLATION OF COTTON. W. A. Reeves and J. D. Guthrie (to U.S. Secretary of Agriculture). USP 2 824 779, Feb. 25, 1958. (1922)

Carbamoylethylation of cellulose textile fibers with acrylamide in the presence of a strong base and a quaternary ammonium hydroxide so that 1 hydroxyl group for every 2 to 6 anhydroglucose units is etherified by a carbamoylethyl, aminoethyl, or carboxyethyl group.

FABRIC WET PROCESSING APPARATUS WITH SOLVENT RECOVERY MEANS. H. J. Ross (to Imp. Chem. Inds. Ltd). USP 2 831 332, Apr. 22, 1958. (1923)

PARTIALLY ACETYLATED, CYANOETHYLATED COTTON FIBERS. J. R. Stephens and L. Rapoport (to Am. Cyanamid Co.). USP 2 825 623, Mar. 4, 1958. (1924)

Cyanoethylated cotton is partially acetylated by reaction with acetic anhydride to introduce at least 0.3 mole of acetyl group per anhydroglucose unit.

CELLULOSE ACETATE OF UNIFORM LUSTER. F. B. Hill and J. Downing (to Brit. Celanese Ltd). USP 2 825 625, Mar. 4, 1958. (1925)

The luster of wet spun cellulose acetate materials is increased and remains uniform to subsequent scouring, dyeing, and laundering by treating the cellulose acetate at any stage of its manufacture (e.g. as freshly spun filaments or as fibers, yarns, or fabrics) with ethyl alcohol.

BASIC HYDROUS CHROMIA AND BASIC WERNER COMPOSITIONS FOR GLASS FIBERS. R. L. Dalton and F. B. Hauserman (to E.I. du Pont de Nemours & Co.). USP 2 825 659, Mar. 4, 1958. (1926)

Werner complexes and their mixtures with hydrous chromia for treating glass fibers or fabrics to be bonded to synthetic resins or plastics.

CREASEPROOFING AGENT. G. Etzel (to E.I. du Pont de Nemours & Co.). USP 2 825 710, Mar. 4, 1958. (1927)

Dimethylol di(methoxymethyl)-urea prepared by the condensation of formaldehyde and dimethyl ether of dimethylolurea is claimed.

APPARATUS FOR CONTINUOUSLY WASHING RUNNING LENGTHS OF TEXTILES. E. S. Olson (to Deering Milliken Research Corp.). USP 2 826 057, Mar. 11, 1958. (1928)

AUTOMATIC ELECTROSTATIC FABRIC COATING APPARATUS. A. S. Davis, Jr. (to Research Corp.). USP 2 826 166, Mar. 11, 1958. (1929)

Apparatus for depositing liquid coating material in finely divided form on fabrics under the influence of an electrostatic field.

FABRIC TREATING APPARATUS. S. Cohn and J. G. Walter (to Samcoe Holding Corp.). USP 2 826 167, Mar. 11, 1958. (1930)

Apparatus for simultaneously impregnating several strips of tubular fabric with liquid.

SIMULTANEOUS SHRINKPROOFING AND CREASEPROOFING OF TEXTILES. C. W. Schroeder (to Shell Development Co.). USP 2 826 514, Mar. 11, 1958. (1931)

Crease and shrink resistant fabrics are obtained by impregnation with an aqueous solution containing an alkanedial, e.g. glutaraldehyde, and a curing agent, e.g. a metal salt of a polyhydric alcohol, followed by heating.

SHRINKPROOFING WOOL TEXTILES. B. B. Kline and N. A. Matlin (to Rohm & Haas Co.). USP 2 827 359, Mar. 18, 1958. (1932)

Protein-containing textiles, particularly woolen fabrics, are made resistant to felting and shrinkage by treatment with an aqueous dispersion of a copolymer of 4-vinyl pyridine and a monoethylenically unsaturated monomer, e.g. an ester of acrylic, methacrylic itaconic, maleic, or fumaric acid.

PROCESS OF PROTECTING SYNTHETIC PROTEIN FIBERS DURING AQUEOUS HEAT TREATMENT. A. M. Sookne and A. E. Davis (to Virginia-Carolina Chem. Corp.). USP 2 828 181, Mar. 25, 1958. (1933)

The incorporation of 1-4% of sodium oxalate in aqueous baths used in the heat treatment of synthetic protein fibers (steaming, dyeing, bleaching) results in an improvement of the mechanical properties of the fibers.

FIRE RETARDANT TREATMENT FOR CELLULOSIC TEXTILES. N. J. Glade, I. Hechenbleikner, and D. W. Kaiser (to Am. Cyanamid Co.). USP 2 828 228, Mar. 25, 1958. (1934)

Fire retardant finish resistant to laundering is obtained by applying a mixture of methylolmelamine with an amidophosphate to a cellulose fabric and heating in the presence of a curing catalyst.

FINISHING POLYESTER FABRICS. N. J. Gajjar (to E. I. du Pont de Nemours & Co.). USP 2 828 528, Apr. 1, 1958. (1935)

Polyester fabric with improved drape and a silk-like handle is obtained by compressing the fabric under heat and pressure to cause deformation, heat setting, and treating with an aqueous alkaline solution until the fabric has lost at least 5% in weight.

INCREASING SHRINK RESISTANCE AND WATER REPELLENCY OF WOOL. C. W. Schroeder (to Shell Development Co.). USP 2 829 071, Apr. 1, 1958. (1936)

The fabric is impregnated with an aqueous medium containing a polyether polyepoxide and an amine catalyst, and heated to cure the epoxy resin precondensate.

CREASEPROOFING TEXTILE MATERIALS. W. B. Thomas (to Bates Mfg. Co.). USP 2 829 072, Apr. 1, 1958. (1937)

The fabric is impregnated with an aqueous solution containing a polyether polyepoxide and a metallic perchlorate catalyst and heated to cure the epoxide.

RESTORING WHITENESS TO YELLOWED NYLON FABRICS. L. J. Barton (to Clorox Co.). USP 2 830 868, Apr. 15, 1958. (1938)

The nylon is treated with an aqueous solution of sodium hypochlorite and a weak organic acid, e.g. acetic or citric acid.

APPARATUS FOR PRESHRINKING CONTINUOUS LENGTHS OF FABRIC. S. Cohn, E. Cohn, F. Catallo, and J. Cohn (to Samcoe Holding Corp.). USP 2 831 233, Apr. 22, 1958. (1939)

Treatment and apparatus for reducing the shrinkage of garments, particularly those made of knit fabrics, during the tumble drying stage of laundering.

FLUID TREATMENT OF SLIVER PACKAGES. J. M. Gould (to Barre Wool Combing Co. Ltd). USP 2 831 747, Apr. 22, 1958. (1940)

Process and apparatus which permits the maintenance of constant and minimum distance of fluid travel regardless of package size.

DYEING AND PRINTING D 2

PRODUCING FAST RED NAPHTHOL DYEINGS AND PRINTS. Farbwerke Hoechst AG. BP 760 574, Nov. 7, 1956. Through BCIRA 37: 559 (1957). (1941)

Bright claret and scarlet tints, and bright mixed tints, are obtained by printing on a fabric (e.g. cotton) that has been grounded with 1-acetoacetylamino-2:5-dimethylbenzene, the diazo compound of 4-amino-4'-nitro-2:5-dimethoxy-1:1'-azobenzene (for claret tints) or the diazo compound of 4-amino-3'-nitro-2:5-dimethoxy-1:1'-azobenzene (for scarlet tints).

DYEINGS FAST TO CROSS DYEING. Farbwerke Hoechst AG. BP 761 067, Nov. 7, 1956. Through BCIRA 37: 639 (1957). (1942)

Dyeings on cellulose acetate, polyamides, or polyurethane, fast to cross dyeing in mixtures with wool or regenerated cellulose, are obtained by using the dialkyl ester of an aminophthalic acid as diazotizable component and the sodium salt of an arylide of 2:3-hydroxynaphthoic acid as coupling component.

AFTERTREATING CELLULOSE MATERIALS DYED WITH SUBSTANTIVE DYESTUFFS. Farbenfabriken Bayer AG. BP 761 668, Nov. 21, 1956. Through BCIRA 37: 638 (1957). (1943)

The agent used is an aqueous solution of a quaternary ammonium compound, particularly a quaternized peralkylated polyethyleneimine, and sodium sulfate (0.05%).

DYEING ACRYLONITRILE FIBERS. Cassella Farbwerke Mainkur AG. BP 762 044, Nov. 21, 1956. Through BCIRA 37: 639 (1957). (1944)

The affinity of acrylonitrile fibers for anionic dyes is enhanced if a cuprous salt is present in the dye bath. A convenient method for securing this is to use a cupric salt and reduce it in the bath by adding a ferrous salt.

DYEING POLYACRYLONITRILE TEXTILES. Sandoz Ltd. BP 782 775, Sept. 11, 1957. (Addition to BP 767 053). Through BCIRA 37: 600 (1957). (1945)

The invention relates to the use of acid monoazo dyes that contain at least one sulfonic acid group and a metalizable (Cu or Ni) group.

ICE COLORS IN TEXTILE PRINTING. Farbenfabriken Bayer AG. BP 762 269, Nov. 28, 1956. Through BCIRA 37: 639 (1957). (1946)

Printing paste contains a diazoamino compound (obtained from a diazotized alkyldihalogeno-or alkoxydihalogeno-aniline and 2-alkylamino-5 (or 4)-sulfobenzoic acid) and a suitable coupling component. The dye is developed in neutral steam without the use of an agent to cause the splitting off of acid or the fixation of alkali.

AFTERTREATMENT FOR IMPROVING THE FASTNESS TO RUBBING OF DYEINGS AND PRINTS. Ciba Ltd. BP 762 510, Nov. 28, 1956. Through BCIRA 37: 638 (1957). (1947)

DYEING CELLULOSE ESTER FIBERS. Ciba Ltd. BP 762 538, Nov. 28, 1956. Through BCIRA 37: 638 (1957). (1948)

Mixtures of 1:4-diaminoanthraquinone and a 1:4-di-(alkylamino)-anthraquinone give dyeings that are less susceptible to artificial light than corresponding dyeings given by pure 1-amino-4-alkylaminoanthraquinone.

METHOD OF TRANSFERRING CURVE CONTOURS OF DYE TO CLOTH. M. Lanner. BP 780 496, Aug. 7, 1957. Through BCIRA 37: 600 (1957). (1949)

GAS FADING INHIBITOR FOR DYED CELLULOSE ACETATE FABRICS. Badische Anilin- & Soda-Fabrik AG. BP 780 764, Aug. 7, 1957. Through BCIRA 37: 600 (1957). (1950)

The fastness to oxides of nitrogen of cellulose acetate dyed with water-insoluble dyes of the amino-anthraquinone series is improved by incorporating small amounts of colorless amino compounds of the type N. N'-dihydroxyethyl-piperazine.

VAT PRINTING PASTE. L. Mills (to Scott Bader & Co. Ltd). BP 780 803, Aug. 7, 1957. Through BCIRA 37: 600 (1957). (1951)

The vat dyestuff printing paste contains thiourea dioxide (formamidine sulfinic acid) as reducing agent; no hydrosulfite is necessary in the padding bath as in the du Pont process.

DYEING AND PRINTING CELLULOSE ESTERS. Badische Anilin- & Soda-Fabrik AG. BP 782 785, Sept. 11, 1957. Through BCIRA 37: 600 (1957). (1952)

Cellulose acetate or triacetate materials are treated before or during dyeing with a carbamic acid ester containing at least one hydroxyl group and one tertiary amine group in the molecule, and dyed with dyes that contain a carboxyl acid, sulfonic acid, or sulfonic acid amide group.

DYEING OR PRINTING POLYACRYLONITRILE FIBERS. Ciba Ltd. BP 783 443, Sept. 25, 1957. Through BCIRA 37: 768 (1957). (1953)

The dye used is a member of the group of 2':4'-diamino-1:1'-azobenzenes, devoid of acid groups imparting solubility, but containing a tertiary amino group at position 4.

DYEING NITROGENOUS FIBERS. Ciba Ltd. BP 783 610, Sept. 25, 1957. Through BCIRA 37: 767 (1957). (1954)

The material (wool, silk, nylon) is dyed in a weakly alkaline to weakly acid medium with the metal (Cr, Co) complex of two different monoazo dyes, both of which are free from carboxylic groups in positions other than ortho to the azo link and only one contains a sulfonic acid group.

DYEING BLENDS. Soc. Rhodiacéta. BP 784 191, Oct. 2, 1957. Through BCIRA 37: 767 (1957). (1955)

Textile fabrics containing both cellulose derivative (e.g. acetate) and polyacrylonitrile fibers are dyed uniformly by first applying a colorless heterocyclic organic nitrogen compound of the type of bis-4:4'-(cyanoethylamino)-dicyclohexylmethane that has an affinity for the cellulose derivative and then a soluble dye in the presence of cuprous ions.

PRODUCING EMBOSSED PIGMENT PRINTS. Ciba Ltd. BP 784 336, Oct. 9, 1957. Through BCIRA 37: 768 (1957). (1956)

The pigment is compounded with an unsaturated resin precondensate (especially an aminoplast) and a dryer of the type of mixed Co, Ca, and Pb naphthenates.

HIGH TEMPERATURE DYEING PROCESS. W. F. Luczynski (to Frymann & Fletcher Ltd). BP 784 394. Oct. 9, 1957. Through BCIRA 37: 767 (1957). (1957)

The material is impregnated with an aqueous solution or dispersion of a suitable dye for each type of fiber present, and passed through a hot air chamber at 160-235° C. The medium may contain ammonium thiocyanate. The process is particularly claimed for Terylene, Orlon, and nylon, and union fabrics containing these and natural fibers.

DYEING AND PRINTING TEXTILES OF ORGANIC ESTERS. Sandoz Ltd. BP 784 668, Oct. 16, 1957. Through BCIRA 37: 768 (1957). (1958)

Cellulose ester (e.g. acetate rayon and triacetate) and polyester (e.g. Terylene) materials are printed or padded with a mixture containing a soluble acid anthraquinone dye having a sulfonic acid group at position 2, a reducing agent (e.g. zinc formaldehyde sulfoxylate, glucose, or sodium cellulose xanthate) and, if desired, a swelling agent, and the dye is fixed (and the sulfonic acid group split off) by steaming.

DYEING PROCESS WITH BASIC PHTHALOCYANINES. Farbenfabriken Bayer AG. BP 784 844, Oct. 16, 1957. Through BCIRA 37: 767 (1957). (1959)

Basic phthalocyanines are applied from slightly acid solutions.

DYEING PILE CARPETS. G. Tillett and M. Tillett (to Deep Dye Industries. Inc.). USP 2 816 811. Dec. 17. 1957. (1960)

Apparatus for applying several colors simultaneously to pile carpets without distortion of boundary lines.

PASTES FOR PIGMENT PRINTING. H. Newby (to Chemische Werke Hüls AG). BP 784 880, Oct. 16, 1957. Through BCIRA 37: 768 (1957). (1961)

The pastes contain a styrene/butadiene copolymer and an ammonium salt (acetate, nitrate, carbonate, thiocyanate, oxalate, or phosphate). The prints resist frequent washing better than those obtained without the ammonium salt.

PIGMENT PRINTING. Farbenfabriken Bayer AG. BP 784 946, Oct. 23, 1957. (Addition to BP 729 122). Through BCIRA 37: 768 (1957). (1962)

The parent invention covered the use of mixtures of vinyl polymers and high-molecular basic compounds in the production of pigment prints that are fast to rubbing and washing. The present invention claims, as basic components of the "latex", compounds containing amino and/or imino groups and epoxy groups, such as the products of the condensation of di- or polyamines (e.g. dipropylene-triamine) and epichlorhydrin.

QUINOPHTHALONE DYES FOR HYDROPHOBIC FIBERS. F. Zwilgmeyer (to E.I. du Pont de Nemours & Co.). USP 2 818 409, Dec. 31, 1957. (1963)

Yellow disperse dyes for hydrophobic fibers which may be converted into cationic dyes for nitrogenous fibers such as nylon, polyacrylonitriles, or wool.

DYEING OR PRINTING POLYACRYLONITRILE FIBERS. P. Rhyner, H. Stern, and J. Wegmann (to Ciba Ltd). USP 2 819 943, Jan. 14, 1958. (1964)

Dyestuffs of 2':4'-diamino-1:1'-azobenzenes which are free from acid groups imparting solubility in water and contain a tertiary amino group in the 4-position.

MULTI-TONE DYEING METHOD. G. F. Spencer (to United Merchants & Mfrs. Inc.). USP 2 823 092, Feb. 11, 1958. (1965)

Method of continuously producing multi-tone effects by compressing cloth into rope form, passing it lengthwise through a padding zone in which the cloth surface acquires random, localized color only in spaced portions,and returning the cloth to open width form for further processing.

COLORED GLASS FIBERS. H. J. Homer and J. R. Whitacre (to Commonwealth Eng. Co.). USP 2 824 828, Feb. 25, 1958. (1966)

Glass fibers in strand or fabric form are coated with a layer of aluminum which is anodized to form aluminum oxide. The anodized coated fibers are then dyed and the product sealed by subjecting the dyed material to a hot aqueous treatment which converts the aluminum oxide to hydrated aluminum oxide.

YARN DYEING DEVICE. J. E. Troy. USP 2 826 058, Mar. 11, 1958. (1967)

Rotatable dyeing applicator which derives its rotation from the moving yarn as it passes over dye impregnated pads on the surface of the applicator.

CONTINUOUS DYEING OF VEGETABLE FIBERS WITH VAT DYES. R. S. E. Hannay and W. Kilby (to Standfast Dyers & Printers Ltd). USP 2 827 357, Mar. 18, 1958. (1968)

Molten metal bath dyeing process in which the yarn or fabric is passed through hot aqueous dye liquor containing a vat dye and an alkali metal hydrosulfite floating on the surface of the bath.

PIECE DYEING WITH WATER-IN-OIL DYE EMULSIONS. F. Sertorio (to Italiana Colori SA). USP 2 828 180, Mar. 25, 1958. (1969)

With the water-in-oil emulsions, the penetration of the dyes is a function of the pressure applied by the padder or printing rollers, and even colors and shades in piece dyeing are obtained. Moreover, double face printing with different designs and colors is possible by regulation of the pressure on each side of the cloth.

MECHANICAL PROCESSES D 3

YARN SINGEING FRAMES. D. Hutchinson (to Fine Spinners & Doublers Ltd). BP 757 135, Sept. 12, 1956. Through BCIRA 37: 480 (1957). (1970)

Guides for ensuring that the running yarn in a vertical, high-speed gassing duct is correctly aligned with the burners.

PLEATED FABRICS. P. Ambard (France). BP 759 412, Oct. 17, 1956. Through BCIRA 37: 562 (1957). (1971)

The invention relates to means for pleating fabrics in which the fabric is pressed into a succession of slots, one by one. An adhesive backing strip is pressed on to the pleated fabric to protect the pleats during normal operations of dress-making and the like.

NAPPING MACHINE. W. N. Hadley (to Parks & Woolson Mach. Co.). BP 760 553, Oct. 31, 1956. Through BCIRA 37: 561 (1957). (1972)

The machine has pile and counter-pile napping rollers (workers) covered with needles, some of them having hook-like ends all pointing in the same direction. The invention relates to two-speed driving means for varying the speed of some rollers relatively to the others.

NAPPING APPARATUS. AaBe Wollenstoffen en Wollendeken Fabrieken NV. BP 760 894, Nov. 7, 1956. Through BCIRA 37: 561 (1957). (1973)

A roughened nap is raised on a pile fabric by means of a cylinder covered with card clothing so arranged that the tips of the wires extend forward in the direction of rotation of the driven cylinder to exert a tractive force on the fabric and move it in opposition to a resistance, the speed of the card clothing being equal to that of the fabric. The fabric leaves the card clothing under a much lower tension when the tips of the wires are normal to the raised nap and parallel to the plane of the fabric.

SINGEING APPARATUS FOR TRIMMING WOVEN FABRIC. A. Schlangen (Germany). BP 780 397, July 31, 1957. Through BCIRA 37: 518 (1957). (1974)

NAPPING MACHINES. E. R. Sellers (to Sellers & Co. (Huddersfield) Ltd). BP 761 436 and 761 437, Nov. 14, 1956. Through BCIRA 37: 641 (1957). (1975)

Means for safeguarding the end to end joints in the length of fabric from damage by the cutters consist of: (1) the driving motor for the cutter of the plug-stopped type whose direction of motion is automatically reversed as a joint approaches the cutter, and which stops until the joint has passed, (2) photoelectric device to detect the approach of the joint and control the motor.

JOINING TOGETHER FABRIC LENGTHS FOR TREATMENT ON MACHINES. E. R. Sellers (to Sellers & Co. (Huddersfield) Ltd). BP 761 530, Nov. 14, 1956. Through BCIRA 37: 635 (1957). (1976)

The ends are butt-sewn together with a gap between them about 1/8 in. wide.

CLOTH GUIDING DEVICES. L. C. Nield (to John Dalglish & Sons Ltd). BP 761 851, Nov. 21, 1956. (Addition to BP 542 323). Through BCIRA 37: 640 (1957). (1977)

The guiding member, a pivoted pin wheel, is deflected about an axis lying in a plane parallel to (preferably coincident with) the horizontal plane of travel of the cloth as it leaves the guiding member.

FABRIC NAPPING MACHINES. A. Monforts and C. M. von Hobe (Germany). BP 779 251, July 17, 1957. Through BCIRA 37: 522 (1957). (1978)

Each napping cylinder is supported on the spider wheel through two stub shafts, and difficulties associated with the removal of the cylinders for grinding are avoided.

MACHINE FOR CONTINUOUSLY CUTTING AND WINDING A [HELICAL] BAND OF TEXTILE OR SIMILAR MATERIAL. Tricotage Fabrieken v/h Frans Beeren & Zonen NV. BP 780 361, July 31, 1957. Through BCIRA 37: 513 (1957). (1979)

CLOTH ROLL. S. G. Dehn and J. D. Robertson. BP 782 010, Aug. 28, 1957. Through BCIRA 37: 600 (1957). (1980)

Means for feeding and accumulating fabric while avoiding lapping.

TEXTILE SHEARING MACHINE. H. Charlesworth (to William Whiteley & Sons Ltd). BP 782 411 and 782 412, Sept. 4, 1957. Through BCIRA 37: 601 (1957). (1981)

Sewn joints in continuous lengths of cloth are detected and the rotating cutter is moved away, temporarily, from the path of the material.

FORMATION OF PLEATS. P. F. Crosland. BP 784 719, Oct. 16, 1957. Through BCIRA 37: 769 (1957). (1982)

Use of a pair of grooved, heated, conical rollers for the formation of sunray pleats in a trapezoidal piece of fabric, which may be impregnated, if desired, with a thermosetting resin precondensate.

CUTTING THERMOPLASTIC FABRICS. V. Uziel (France). BP 785 264, Oct. 23, 1957. Through BCIRA 37: 769 (1957). (1983)

In cutting a substantial pile of nylon or other thermoplastic fabrics, a heated tool is used so that the cut edges seal themselves against fraying but, to prevent the layers from sticking together, a blast of hot gas (e.g. electrically heated air or the flame of a gas burner) is played on the edge of the pile at the same time.

APPARATUS FOR COILING AND MATING FILAMENTS, ETC., SUCH AS SPIRAL SLIDE FASTENERS. L. Schwartz (to Cue Fastner, Inc.). USP 2 817 206, Dec. 24, 1957. (1984)

AUTOMATIC MECHANISM FOR CLOSING AND CUTTING KNITTED SEAMLESS CIRCULAR PAPER BAGS. R. H. Marks. USP 2 819 467, Jan. 14, 1958. (1985)

NYLON YARN HEATING SYSTEM. G. F. Benn (to J. P. Stevens & Co.). USP 2 820 280, Jan. 21, 1958. (1986)

Heating system for use with equipment for heat setting synthetic yarns which will deliver uniform heat to units at progressively increasing distances.

HOLDER FOR FABRIC MARKING DEVICE. P. Wild-Fierz (to D. Wild & Co.). USP 2 821 007, Jan. 28, 1958. (1987)

Electrically or pneumatically operated slide mechanism for a marker used in the hand application of marking threads to the edge of a continuously moving fabric. Its purpose is to make this work easier.

PLEATING APPARATUS. J. H. Howard (to Cranston Print Works Co.). USP 2 821 237, Jan. 28, 1958. (1988)

Apparatus for continuous, high speed pleating of an extended web of fabric, the pleats being parallel to the long dimension of the fabric. The apparatus may be used with resin impregnated fabrics.

TUBULAR KNITTED FABRIC DRYER. M. G. Fernandez (Cuba). USP 2 821 769, Feb. 4, 1958. (1989)

For final drying of fabric after it has been bleached or color dyed and passed through an initial drying process (such as squeezing rolls or centrifuge so that the fabric is still damp dry or humid).

PIN PLATE ATTACHMENT FOR CLIP TENTER CHAIN. E. C. Rust, Jr. (to James Hunter Mach. Co.). USP 2 822 601, Feb. 11, 1958. (1990)

Pin plate which may be readily attached or detached from a clip type tenter chain link so that the fabric may be held either by clips or pins depending on the nature of the fabric.

FABRIC SEPARATING APPARATUS. L. King (to Pyramid Mfg. Co.). USP 2 822 602, Feb. 11, 1958. (1991)

Apparatus for removing separator threads joining juxtaposed strips of fabric during weaving or knitting.